

No. 10. — *The Ornithology of Guerrero, Mexico*

BY LUDLOW GRISCOM

Ornithologists have long known that the State of Guerrero was one of the richest sections of Mexico, which would well repay further investigation. The hot Pacific lowlands are a part of the very distinct fauna closely related to the Central American Arid Tropical Fauna. The lofty Sierra Madre del Sur almost bisects the State into a northern and southern half. It is remarkable for being the meeting ground of three different faunas. Most important of all, perhaps, this mountain range is the northernmost outpost, on the western side of the continent, of the Subtropical Zone of Central America and the Andes. It also proves to be the southern limit of various boreal, Rocky Mountain, or Upper Sonoran types. Finally the many birds characteristic of the table-land of Mexico reach these mountains as one of their western or southwesternmost outposts. These factors combined result in a remarkable assemblage of endemic species and subspecies, and every competent collection made there has yielded a rich harvest of new forms.

The Museum of Comparative Zoölogy was accordingly fortunate in securing the services of the veteran collector W. W. Brown, who happened to be in Mexico City early in 1930 on a free lance expedition. With some difficulty he was persuaded to collect in Guerrero, reached that State in early October and remained until June, 1932. The first six months were spent in the lowlands on both sides of the mountains, and the final year in the mountains around Chilpancingo. Unfortunately Mr. Brown never really collected in high cloud forest, but his collection gained in the thoroughness with which the high pine and oak woods were combed, as the results recorded beyond amply prove. We accordingly purchased his entire Guerrero collection, slightly over 1,500 specimens.

His itinerary was as follows:—

TAXCO. A large town northwest of Iguala. Oct. 9–Nov. 1, 1930 and Nov. 10–15, 1930.

IGUALA. A town on the railroad south of Cuernavaca in Morelos, and well north of the Sierra Madre. Altitude about 3,000 ft. Nov. 5, 1930.

CACALATENANGO. A hamlet in the immediate vicinity of Iguala. Nov. 10 and 11, 1930.

PIÉ DE LA CUESTA. A hamlet at the foot of the mountains in the Pacific lowlands, along the old mule trail from Chilpancingo. Dec. 11-20, 1930.

ACAPULCO. The well-known seaport town. Dec. 15, 1930-Jan. 17, 1931; May 1-8, 1931.

COYUCA. A town in the Pacific lowlands northwest of Acapulco; not to be confused with another town of the same name north of the Sierra Madre in the valley of the Rio de las Balsas. Jan. 15-April 20, 1931.

CHILPANCIINGO. A city in the mountains at about 4,000 ft. altitude. May 23, 1931-June 7, 1932.

There is practically no ornithological history to Guerrero, as the only two really important collections made there have never been reported on. Lesson records a few birds from Acapulco picked up by his naval brother. Lafresnaye described a bird or two brought from Acapulco by Leclancher, notably the type of *Passerina leclancheri*. Col. Grayson paid Acapulco a flying visit, and his specimens were recorded by Lawrence. Markham also obtained a few birds around Acapulco. These and other scattered records are all brought together by Salvin and Godman in the *Biologia Centrali-Americana*. A really great and thorough collection from representative localities was made for Salvin and Godman by Mrs. H. H. Smith. She visited the Pacific lowlands, the mountains at Chilpancingo and Omilteme, and various parts of the interior. She discovered numerous novelties, particularly in the high mountains. None of her material reached England until 1888. Some of the species she obtained are recorded in the *Biologia*, but we know nothing of the whole oscine Passeres. O. T. Baron followed closely on Mrs. Smith's heels in the mountains. His special object was to secure good series of the rare and new hummingbirds discovered by her, in which he was entirely successful. Hartert reported on these hummers, but if Baron collected other birds, they remain unrecorded. As is well known, Nelson and Goldman travelled extensively but very rapidly through the State on a biological reconnaissance. They wasted no time and nearly doubled the number of known endemic forms from the region. It is they who have always said that the State still awaits thorough exploration.

The collection before me amply demonstrates the correctness of this viewpoint. At the present writing I have found definite records for but 177 birds from Guerrero. To these Brown adds 110, including one new genus, numerous new subspecies, and range extensions for numerous other genera and species, without ever having reached the Sub-

tropical Zone. A glance at the list beyond shows obvious gaps in family after family. Guerrero is still without a Tinamou, scarcely a Swift, a Hawk, or a water-bird. Many Pacific lowland species are well-known from both north and south of Guerrero, and certainly occur there too. Another glance at the map shows how minute a section of the State has been covered by the recorded collecting stations. The Sierra Madre is an important range of considerable length and two different divisions. It rises to over 11,000 ft. No one has really collected above 8,000 ft., and only one section of this range north of Chilpancingo has ever been explored. The varied nature of the terrain in the interior can best be gleaned by reading Gadow's "Through Southern Mexico," (Chaps. XVI-XIX), a delightfully written account by a great naturalist. I venture to predict that not less than 150 species remain to be found in Guerrero, and there is not the slightest ground for supposing that no further interesting novelties await the explorer in the higher mountains. I earnestly hope that this paper will stimulate and not discourage other people from further investigation.

A few words can now be devoted to those species which are definite indicators of either special faunal areas or life-zones.

*Species characteristic of the Subtropical Zone.*¹

* <i>Dendrortyx macrourus striatus</i>	* <i>Xiphocolaptes promeroperhynchus</i>
<i>Dactylortyx thoracicus</i> subsp.	<i>omiltemensis</i>
* <i>Oreopeleia albifacies rubida</i>	<i>Xiphorhynchus erythropygius ery-</i>
<i>Campylopterus hemileucurus</i>	<i>thropygius</i>
* <i>Eupherusa poliocerca</i>	<i>Lepidocolaptes affinis affinis</i>
* <i>Lampornis margarethæ</i>	* <i>Aphelocoma guerrerensis</i>
* <i>Lampornis pringlei</i>	* <i>Cyanolyca mirabilis</i>
* <i>Aulacorhynchus prasinus wagleri</i>	* <i>Henicorhina leucophrys festiva</i>
* <i>Grallaria guatemalensis ochraceiventris</i>	* <i>Catharus frantzii omiltemensis</i>
<i>Xenicopsoides variegaticeps</i>	<i>Basileuterus belli clarus</i>
* <i>Automolus rubiginosus guerrerensis</i>	* <i>Chlorospingus ophthalmicus albifrons</i>
	<i>Buarremon brunneinuchus</i>

This list can advantageously be contrasted with that of Guatemala (cf. Griscom, Birds Guat., p. 54); only 21 species instead of 40. We see a further decrease, therefore, in the development of this Zone, but a similar high degree of endemism, thanks to the isolated islands into which this Zone is broken up throughout Central America. Another factor tends still further to reduce the importance of this Zone in

¹ Endemic forms are marked with an *.

Guerrero. Writing of conditions in Guatemala (*op. cit.*, pp. 56-58), I had occasion to point out that various genera and species, absolutely characteristic of the Subtropical Zone in Central America, were not confined to this Zone in Guatemala (particularly in the western half), but were variously arid tropical or temperate. This state of affairs is increased in Guerrero and other parts of western Mexico. Birds like *Streptoprocne*, *Mitrephanes*, *Myadestes*, *Turdus assimilis*, *Myioborus*, *Atlapetes gutturalis*, and *Tanagra elegantissima* cease to be characteristic of the Subtropical Zone.

*Endemic forms characteristic of the West Mexican
Arid Tropical Fauna*

<i>Crypturus cinnamomeus occidentalis</i>	<i>Cissilopha sanblasiana</i> subsp.
<i>Ortalis vetula poliocephala</i>	<i>Heleodytes capistratus humilis</i>
* <i>Amazona finschi</i>	<i>Pheugopedius felix</i> subsp.
<i>Piaya cayana mexicana</i>	<i>Thryophilus sinaloa</i> subsp.
<i>Morococcyx erythropygus mexicanus</i>	* <i>Turdus rufo-palliatu</i> s
<i>Caprimulgus ridwayi</i>	<i>Polioptila bilineata nigriceps</i>
<i>Anthoscenus constantii leocadiae</i>	* <i>Vireo hypochryseus</i>
<i>Trogon citreolus</i>	<i>Granatellus venustus</i>
<i>Momotus mexicanus</i>	* <i>Cassiculus melanicterus</i>
<i>Centurus chrysogenys</i> subsp.	<i>Icterus pustulatus</i> subsp.
<i>Xiphorhynchus flavigaster mentalis</i>	<i>Pheucticus chrysopeplus</i>
* <i>Deltarhynchus flammulatus</i>	<i>Sporophila torqueola</i>
<i>Tyrannus crassirostris</i> subsp.	* <i>Cardinalis carneus</i>
<i>Calocitta formosa formosa</i>	<i>Aimophila humeralis</i>
<i>Xanthoura luxuosa</i> subsp.	<i>Aimophila acuminata</i>
	* <i>Passerina leclancheri</i>

Those species marked with an asterisk are not represented south of the Isthmus of Tehuantepec, the northern limit of the Central American Arid Tropical Fauna, to which the West Mexican is closely related. Further comparisons will prove instructive.

Genera not found south of Isthmus	2
“ “ “ north “ “	2
Species “ “ south “ “	20
“ “ “ north “ “	16
“ common to both areas	38

It will be noted at once that the resemblances between these two areas are much greater than the differences, and we must recall that

we are confining our remarks solely to genera and species which are peculiar to the arid tropics in Middle America. If either of these subdivisions be contrasted with the birds of the Humid Tropical Zone on the Caribbean coast of Vera Cruz or Central America, it will be clear that in the first case we are contrasting two subdivisions of one great faunal area, and in the second case we are contrasting two totally different faunal areas, to the ornithologist two different worlds.

It will be seen then that the West Mexican and the Central American Arid Tropical Faunas bear the same relation to each other, with about the same degree of difference, as the Caribbean Humid Tropical Fauna of Central America does to the Colombian-Pacific Fauna. In both cases there is continuity of climate and habitat. In both cases there is little generic endemism and a high proportion of representative species or subspecies. It is striking and thought-provoking that in both cases a famous isthmus is the approximate boundary between the two pairs of faunas. Common sense might well expect two mountain faunas separated by the lowlands of an intervening isthmus to be still more different. In Middle America, however, the actual facts are reversed. The collector of characteristic Subtropical Zone birds who proceeds from Guatemala to Guerrero will find nothing but representative species and subspecies in the second locality. But if he goes from San José to Acapulco, he will leave some genera and many striking species behind, and find as many others in the new place.

I might add that another aspect of the bird-life of the tropical lowlands of southwestern Mexico is the frequency of racial variation in birds of general distribution in the Tropical Zone. Sometimes this is carried to a still finer point. In Guerrero it is apparent in a few cases that the bird of the interior is racially separable from the bird of the Coastal plain. Presumably the valley of the Rio de las Balsas is the highway up which some tropical birds reach the interior.

The inosculation, however, of tropical and temperate zone birds on the edges of the great Mexican tableland, and the mixture of endemic and boreal types in the higher altitudes is a gigantic zoögeographic problem quite outside the scope of this paper, primarily a report on the birds of Guerrero. The coastal lowlands are in the heart of the West Mexican Arid Tropical Fauna, which has been defined and contrasted with the faunal areas southward. A feeble remnant of the expiring Subtropical Zone of Central America occurs in the mountains. The balance of the bird-life of the State is not a local but a major problem in one of the most complicated land masses of the world.

Systematic List

FAMILY CRACIDAE

ORTALIS VETULA POLIOCEPHALA (Wagler)

Coyuca, 1 ♂, Jan. 26.

I can see no reason for keeping this bird specifically distinct from *vetula*.

FAMILY COLUMBIDAE

COLUMBA FASCIATA FASCIATA Say

Chilpancingo, 1 ♀, May 30.

MELOPELIA ASIATICA MEARNSI Ridgway

Chilpancingo, 1 ♀, Jan. 7.

ZENAIDURA MACROURA MARGINELLA (Woodhouse)

Chilpancingo, 4 ♀, Oct. 27–Jan. 5.

SCARDAFELLA INCA (Lesson)

Chilpancingo, 1 ♂.

COLUMBIGALINA PASSERINA PALLESCENS (Baird)

Coyuca, 1 ♂, 1 ♀; Chilpancingo, 1 ♂.

COLUMBIGALLINA RUFIPENNIS ELUTA Bangs

Coyuca, 1 ♂, 1 ♀.

LEPTOTILA VERREAUXI ANGELICA Bangs

Chilpancingo, 1 ♂, Oct. 20.

FAMILY CHARADRIIDAE

CHARADRIUS COLLARIS Vieillot

Acapulco, 1 ♂, Dec. 15, 1930.

NUMENIUS HUDSONICUS Latham

Acapulco, 1 ♀, Jan. 1.

TOTANUS FLAVIPES (Gmelin)

Coyuca, 1 ♀, Feb. 6, 1931.

ACTITIS MACULARIA (Linnaeus)

Chilpancingo, 1 ♀, Jan. 7.

FAMILY JACANIDAE

JACANA SPINOSA GYMNOSTOMA (Wagler)

Acapulco, 1 ♂, 1 ♀; Pié de la Cuesta, 1 ♀.

FAMILY ARDEIDAE

FLORIDA CAERULEA (Linnaeus)

Acapulco, 1 ♂.

BUTORIDES VIRESCENS VIRESCENS (Linnaeus)

Acapulco, 2 ♀; Pié de la Cuesta, 1 ♀; all in December.

FAMILY ACCIPITRIDAE

ACCIPITER VELOX VELOX (Wilson)

Chilpancingo, 1 ♀, Nov. 15.

BUTEO ALBICAUDATUS HYPOSPIDIUS Gurney

Chilpancingo, 1 ♂.

BUTEO MAGNIROSTRIS GRISEOCAUDA (Ridgway)

Coyuca, 1 ♂, 1 ♀.

ASTURINA PLAGIATA PLAGIATA Schlegel

Acapulco 1 ♂; Coyuca, 1 ♀.

FAMILY FALCONIDAE

HERPETOTHERES CACHINNANS CACHINNANS (Linnaeus)

Coyuca, 1 ♂, April 15.

CERCHNEIS SPARVERIA PHALAENA (Lesson)

Acapulco, 1 ♀; Taxco, 1 ♂, 2 ♀; Chilpancingo, 3 ♂, 8 ♀; Oct. 12–March 15.

FAMILY BUBONIDAE

STRIX VARIA SARTORII (Ridgway)

Chilpancingo, 1 ♂, 1 ♀.

BUBO VIRGINIANUS MELANCERUS (Oberholser)

Chilpancingo, 2 ♂, 1 ♀.

CICCABA VIRGATA subsp.

Chilpancingo, 2 ♀.

These birds are quite distinct in being intermediate between *centralis* Griscom of Oaxaca southward, and *squamulata* of northwestern Mexico.¹

SPEOTYTO CUNICULARIA HYPOGAEA (Bonaparte)

Chilpancingo, 1 ♀, Jan. 14.

GLAUCIDIUM BRASILIANUM RIDGWAYI Sharpe

Coyuca, 1 ♀.

GLAUCIDIUM MINUTISSIMUM PALMARUM Nelson

Chilpancingo, 1 ♂, Dec. 3, 1931.

This specimen confirms my opinion that *palmarum* is merely a pale west Mexican representative of *minutissimum guoma*.

¹ Similar birds have just been described as *C. v. amplonotata* Kelso.

FAMILY PSITTACIDAE

ARATINGA CANICULARIS EBURNIROSTRUM (Lesson)

Acapulco, 2 ♂, 1 ♀; Coyuca, 3 ♂.

AMAZONA ALBIFRONS ALBIFRONS (Sparrmann)

Acapulco, 3 ♀.

FAMILY ALCEDINIDAE

CHLOROCERYLE AMAZONA (Latham)

Acapulco, 1 ♀.

FAMILY MOMOTIDAE

MOMOTUS MEXICANUS MEXICANUS Swainson

Cacalotenango, 1 ♀; Chilpancingo, series of 31.

I can see no constant or trenchant characters in *saturatus* Nelson.

FAMILY CAPRIMULGIDAE

CHORDEILES ACUTIPENNIS TEXENSIS Lawrence

Coyuca, 1 ♂; Chilpancingo, 2 ♂, 1 ♀, Jan. 5–April 27.

NYCTIDROMUS ALBICOLLIS NELSONI Ridgway

Acapulco, 3 ♂; Coyuca, 1 ♀.

CAPRIMULGUS RIDGWAYI (Nelson)

Chilpancingo, 1 ♀, April 30.

FAMILY MICROPODIDAE

CHAETURA VAUXII VAUXII (Townsend)

Taxco, 2 ♂, 1 ♀, Nov. 10, 1930.

FAMILY TROCHILIDAE

SAUCEROTTIA BERYLLINA VIOLA (Miller)

Series of 38 from Taxco and Chilpancingo.

AMAZILIA RUTILA RUTILA (Delattre)

Acapulco 7 ♂, 5 ♀; Coyuca, 1 ♀.

AMAZILIA VIOLICEPS VIOLICEPS (Gould)

Morelos, Cuernavaca, 2 ♂ ad., 2 ♂ imm., 1 ♀ ad.;

Guerrero, Naranjo, 1 ♂ ad.; Taxco, 1 ♂ imm.;

Chilpancingo, 10 ♂ ad., 5 ♀ ad., 18 of both sexes variously immature.

This splendid series, when combined with other series from Jalisco, Sonora and Chihuahua, confirms me in the suspicion I have entertained for years that one of the most remarkable multiplication of species in Hummingbirds has taken place in the west Mexican representatives of this poorly circumscribed genus.

No less than four main specific concepts have been proposed in the *verticalis* group, of which three are definitely recorded from the same geographic area. The character which has been mainly relied upon is the color of the crown, as follows:—

Crown glittering

a. Crown blue = *A. verticalis* auct. nec Lichtenstein = *elliotti* Berlepsch

b. Crown violet = *A. violiceps* (Gould)

Crown dull or dusky

c. Crown greenish = *A. viridifrons* (Elliot)

d. Crown indigo blue = *A. guerrerensis* (Salvin and Godman)

As a matter of fact these variations in crown color are purely questions of sex and age, as is now conclusively proven by the large series before me. The youngest stage is *viridifrons*, the next is *guerrerensis*, both adult males and females have glittering blue crowns (*verticalis*), and only the oldest males are *violiceps*. Mr. Ridgway seems to have suspected this state of affairs, as he definitely reduced *guerrerensis* to the adult plumage of *viridifrons*. It is difficult to understand how this treatment has lasted so long, when the common and most closely related species, *A. cyanocephala* of southeastern Mexico and northern Central America, shows exactly the same crown color variations

according to maturity and sex. These four specific concepts therefore boil down to one species, the earliest name for which is *violiceps* (Gould). Indeed I am by no means sure that *violiceps* is specifically distinct from *cianocephala*. They unquestionably are close representatives, and their ranges come so close to overlapping, that good series from the debatable area in Oaxaca, Puebla and western Vera Cruz will probably produce intermediate or connecting specimens. For the present, however, I am content to treat *violiceps* as specifically distinct.

We may now consider the marked racial variation in *violiceps*. To summarize it, the most northern birds are the dullest and palest, the most southern are the darkest, brightest and greenest. In addition to this, birds from Morelos, Guerrero and Oaxaca have bronze to coppery bronze tails instead of dull greenish bronze tails, and in series of *comparable age and sex*, the crown averages slightly darker or deeper colored, bluer rather than greener in immature specimens, more violet rather than blue in adult males.

With 17 specimens from Jalisco before me representing *elliotti*, another series of 14 from Sonora and Chihuahua prove to be racially separable. They may be known as

AMAZILIA VIOLICEPS CONJUNCTA subsp. nov.

Type. No. 224,112, Mus. Comp. Zoöl.; ♂ ad.; Alamos, southern Sonora, Mexico; Feb. 16, 1888; M. Abbott Frazar.

Characters. Resembling *elliotti* (Berlepsch) of Jalisco and Sinaloa, but crown in adult males noticeably violet rather than deep blue, without any blue or green reflections in the posterior border of the plaque; crown in females and young averaging bluer, less green according to age; both sexes duller colored above, more dusky brownish, less green, particularly noticeable in the tails of adult males.

The races are consequently as follows:—

1. *A. violiceps violiceps* Gould. Includes *viridifrons* Elliot and *guerrerenensis* Salvin and Godman as immature stages; and *atricapilla* Simon as an aberration, and *derneddei* Simon as an unnecessary renaming of *viridifrons* Ridgway on the theory that it was not *viridifrons* Elliot, guessed to belong to another group. Range chiefly Oaxaca, Guerrero and Morelos. Relatively darkest, brightest, and greenest; crown plaque averaging more deeply colored; tail bronze to coppery bronze.

2. *A. violiceps elliotti* (Berlepsch). *A. quadricolor* of authors, *nec* Vieillot; *A. verticalis* of authors, *nec* Lichtenstein as to description and

specimen No. 27, the first one mentioned.¹ Southern Sinaloa to Jalisco. Not quite so dark or so bright green; crown lighter colored; tail greenish bronze, never coppery.

3. *A. violiceps conjuncta* Griscom. See above.

There remains one more so-called species to discuss, the unique adult male type of *salvini* (Brewster), which is before me, and which I have never hitherto carefully examined. By inference I had always doubted the existence of another species of this genus in Sonora. Geographically and faunally there is no basis for one, and the failure to duplicate the type in over forty years has further significance, and in part at least strengthens this view. My late esteemed colleague Outram Bangs always supposed that *salvini* was of hybrid origin.

A careful study of the color and structural characters of the type convinces me that *Cyanomyia salvini* Brewster is a hybrid between *Amazilia violiceps conjuncta* and *Cyananthus latirostris* Swainson. These closely related genera differ in (1) *Amazilia* has the frontal feathering extending forward to and partially concealing the nasal operculum; (2) the tail is slightly forked in *Cyananthus*, truncate in the section of *Amazilia* with which we are here concerned. In these respects *salvini* is an *Amazilia* as to the frontal feathering, but the tail is slightly forked as in *Cyananthus*. In size *salvini* resembles the *Cyananthus*, a considerably smaller bird than *A. violiceps*. The color characters combine the two supposed parents perfectly. The glittering violet crown plaque of *violiceps* combined with the plain green of *Cyananthus* produces a glittering bluish green plaque. The green upper back fading to dusky green is a perfect combination of the dusky versus dark green upperparts of the supposed parents. The tail is dark green instead of steel blue versus dull dusky bronzy green, and the feathers have the gray tips of *Cyananthus*. The underparts are white medially as in the *Amazilia*, but the sides of the neck and chest are glittering bluish green, passing to green on the sides and flanks, just as in the *Cyananthus*.²

PHAEOPTILA SORDIDA (Gould)

Series of 64 from Taxco and Chilpancingo.

¹ Hellmayr was the first to point out that Lichtenstein's *verticalis* was really *cianocephala* Lesson. He mentions three specimens "in Berlin and Vienna," one of which must have been Lichtenstein's No. 27. He was mistaken, however, in saying that all three specimens were *cianocephala*. Mr. van Rossem kindly informs me that No. 28 is undoubtedly *violiceps* Gould, and his notes describing the bird prove this. Dr. Hellmayr was also mistaken in using three specimens. The name *verticalis* can only be applied to one of the two specimens mentioned in the original description, and it is immaterial to what species a third specimen of Lichtenstein's belongs.

² Long after this was written, I received Mr. Berlioz's excellent paper reviewing this group (Rev. Franc. d'Orn., 1932, no. 1, pp. 129-132). We are in substantial agreement in the reduction of species.

HYLOCHARIS LEUCOTIS LEUCOTIS (Vieillot)

Taxco, 1 ♂; Chilpancingo, 1 ♂.

CYNANTHUS LATIROSTRIS Swainson

Taxco, 1 ♂.

CYNANTHUS DOUBLEDAYI (Bourcier)

Acapulco, 1 ♂, Coyuca. 2 ♂, 1 ♀.

CHLOROSTILBON AURICEPS (Gould)

Chilpancingo, 5 ♂, 2 ♀.

COLIBRI THALASSINUS (Swainson)

Taxco, 1 ♂.

EUGENES FULGENS (Swainson)

Taxco, 2 ♂, 2 ♀.

CYANOLAEMUS CLEMENCIAE CLEMENCIAE (Lesson)

Taxco, 1 ♂, Oct. 27, 1930.

LAMPROLAIMA RHAMI RHAMI (Lesson)

Chilpancingo, 1 ♂.

ANTHOSCENUS CONSTANTII LEOCADIAE (Bourcier and Mulsant)

Coyuca, 1 ♀.

TILMATURA DUPONTII DUPONTII (Lesson)

Chilpancingo, 1 ♂, 2 ♀; Taxco, 2 ♂, 2 ♀.

ARCHILOCHUS COLUBRIS (Linnaeus)

Chilpancingo 7 ♂, 2 ♀, Taxco, 1 ♂, 1 ♀; Aug. 20–Oct. 23.

ARCHILOCHUS ALEXANDRI (Bourcier and Mulsant)

Chilpancingo, 1 ♂, Feb. 5, 1932.

CALOTHORAX LUCIFER (Swainson)

Taxco, 1 ♀; Chilpancingo, 1 ♂, 3 ♀, Oct. 17–Jan. 4.

CALOTHORAX PULCHER (Gould)

Chilpancingo, 2 ♂, 2 ♀.

SELASPHORUS PLATYCERCUS PLATYCERCUS (Swainson)

Taxco, 1 ♀, Nov. 1, 1930.

SELASPHORUS RUFUS (Gmelin)

Chilpancingo, 1 ♀, Jan. 14; Taxco, 2 ♂, 1 ♀, Oct. 14–Nov. 1.

STELLULA CALLIOPE LOWEI subsp. nov.

Type. No. 163518. Mus. Comp. Zoöl.; ♂ ad.; Taxco, Guerrero, Mexico; Oct. 25, 1930; W. W. Brown.

Characters. Adult male strikingly distinct from typical *calliope* in having a shorter less full gorget, rose or pinkish lilac in color, instead of rich lilac purple.

Remarks. Gould's description of *Stellula calliope* was based on birds collected by Floresi (presumably) in the Valley of Mexico, where the species is a winter visitant only, so far as we know. The presence of the species in Guerrero has rested hitherto on a female collected by Mrs. Smith in August. The two males from Guerrero were so distinct from western United States specimens that I sent one male of each type to Dr. Lowe of the British Museum, asking him to compare them with Gould specimens from the type locality. He was so kind as to do so, and writes that the two Gould males "unquestionably seem to me to belong to the category with richer, fuller and longer gorget, as in your western United States specimen."

In recognition of his courtesy on this and previous occasions, I take pleasure in dedicating the new form to him.

FAMILY TROGONIDAE

TROGON CITREOLUS Gould

Coyuca, 3 ♂, 1 ♀.

TROGON MEXICANUS Swainson

Chilpancingo, 5 ♂, 2 ♀.

FAMILY CUCULIDAE

COCYZUS MINOR PALLORIS Ridgway

Chilpancingo, 1 ♀, Jan. 24, 1932.

It is certainly astonishing to find a Mangrove Cuckoo so far from the Coast.

PIAYA CAYANA MEXICANA (Swainson)

Chilpancingo, 3 ♂, 1 ♀.

GEOCOCCYX VELOX (A. Wagner)

Chilpancingo, 1 ♂, 1 ♀.

MOROCOCCYX ERYTHROPYGUS MEXICANUS Ridgway

Coyuca, 3 ♀.

CROTOPHAGA SULCIROSTRIS SULCIROSTRIS Swainson

Coyuca, 1 ♀; Chilpancingo, 2 ♂, 3 ♀.

FAMILY PICIDAE

COLAPTES CAFER MEXICANUS Swainson

Chilpancingo, 3 ♂, 2 ♀.

The race *mexicanus* is a small and dark extreme of the species, inhabiting the whole southern half of Mexico. It is quite different from the large, pale *collaris* of the western United States south to Sonora and Chihuahua. In northeastern Mexico there proves to be a very small, very pale extreme described below.

COLAPTES CAFER NANUS subsp. nov.

Type. No. 98788, Mus. Comp. Zoöl.; ♂ ad.; Ipina, San Luis Potosi, Mexico; Nov. 30, 1924; W. W. Brown.

Characters. Differing radically from every described race of the Red-shafted Flicker in being smaller even than *mexicanus* Swainson of southern Mexico, and a much paler greyer brown above even than *collaris* (Vigors) of the western United States.

Remarks. The characters given above are based on winter specimens in fresh plumage compared with similar material of *mexicanus* and *collaris*. A worn young August specimen is naturally less easily distinguishable on color characters, and fledglings from San Luis Potosi are not separable in color from *collaris*.

Measurements of Wing

<i>mexicanus</i>	5 ♂, 152 -161 (158)
<i>nanus</i>	4 ♂, 144.5-150 (146.0)
<i>collaris</i>	20 ♂, 160 -174 (168.3)

Material Examined

<i>mexicanus</i>	— small series from Vera Cruz and Guerrero
<i>collaris</i>	— very large series from western United States and Chihuahua.
<i>nanus</i>	— Tamaulipas; Victoria, 1 ♀. San Luis Potosi: Alvarez, 1 ♀ yg; San Luis Potosi, 1 ♂ ad., 4 nestlings; Bocas, 1 ♂; Ipina 2 ♂.

BALANOSPHYRA FORMICIVORA FORMICIVORA (Swainson)

Chilpancingo, 2 ♂, 1 ♀.

CENTURUS CHRYSOGENYS FLAVINUCHUS Ridgway

Coyuca, 6 ♂, 2 ♀.

SPHYRAPICUS VARIUS VARIUS (Linnaeus)

Chilpancingo, 1 ♂, 1 ♀, March 9 & 25.

DRYOBATES VILLOSUS JARDINI (Malherbe)

Chilpancingo, 1 ♂, 3 ♀.

DRYOBATES SCALARIS AZELUS Oberholser

Chilpancingo, 1 ♂, 3 ♀.

CEOPHLÆUS LINEATUS SCAPULARIS (Vigors)

Coyuca, 2 ♂.

FAMILY FORMICARIIDAE

GRALLARIA GUATIMALENSIS OCHRACEIVENTRIS Nelson

Chilpancingo, 1 ♂.

FAMILY DENDROCOLAPTIDAE

XIPHOCOLAPTES PROMEROPHIRHYNCHUS OMILTEMENSIS Nelson

Chilpancingo, 1 ♂.

XIPHORHYNCHUS FLAVIGASTER MENTALIS (Lawrence)

Coyuca, 1 ♀.

LEPIDOCOLAPTES LEUCOGASTER (Swainson)

Chilpancingo, 1 ♀.

LEPIDOCOLAPTES AFFINIS AFFINIS (Lafresnaye)

Chilpancingo, 4 ♂, 2 ♀.

FAMILY COTINGIDAE

PLATYPSARIS AGLAIAE ALBIVENTRIS (Lawrence)

Acapulco, 1 ♀; Coyuca, 2 ♂, 2 ♀; Chilpancingo, 1 ♂, 1 ♀.

The Chilpancingo specimens and another from Cuernavaca, Morelos show a distinct approach to typical *aglaiae*.

TITYRA SEMIFASCIATA GRISEICEPS Ridgway

Chilpancingo, 1 ♂.

FAMILY TYRANNIDAE

ELAINEA PLACENS JALISCENSIS (Nelson)

Chilpancingo, 6 ♂, 8 ♀.

This little known race is apparently based on three males from two localities in Jalisco, and the species is unrecorded between there and

Vera Cruz. The occurrence of any form in Guerrero is, therefore, a matter of some geographic interest. The excellent series before me fully confirms the validity of *jaliscensis*. This subspecies differs from typical *placens* in the larger size (wing of males 67.5-72, average 70; female 3 mm. less); the slenderer bill, noticeable at a glance; the paler yellow below; and the greyer cast to the olive green areas.

CAMPTOSTOMA IMBERBE Sclater

Chilpancingo, 2 ♂, 2 ♀; Naranjo, 1 ♀.

I have now seen excellent series of this little flycatcher both in New York and Cambridge from every section of its range, including the types of *ridgwayi* Brewster and 15 other specimens from Sonora, Chihuahua and southern Arizona. The more material I have seen, the more Ridgway's judgment in not recognizing *ridgwayi* has been confirmed. This little bird, living as it does mostly in thorny scrub, is particularly susceptible to wear. Fresh specimens (September to November) are distinctly olive above and yellowish below. By January these color tones have about half gone, and worn breeding specimens are sometimes little more than greyish above and whitish below. In the northern half of the range the bird is chiefly a summer migrant and fresh fall specimens (October & November) are scarce or lacking in collections. In Central America, however, worn breeding birds are equally scarce, as collectors have uniformly avoided the tropics at this season. July and August specimens from Progreso, Guatemala, however, collected by A. W. Anthony cannot be distinguished from the series from Sonora before me. My friend van Rossem has recently urged the recognition of *ridgwayi* (Proc. Biol. Soc. Wash., **43**, 1930, pp. 129-130). He also does not believe in any color difference, and points out with his usual acumen, the apparent existence of two color phases, a greyer and a more olive one, apart from the changes due to wear outlined above. He urges, however, size characters to separate northwestern specimens, and presents a table of measurements which would certainly prove his point did it hold on the basis of additional material. I have measured at least five times as many specimens as the 6 males on which he bases his measurements for *imberbe*, and double the number of *ridgwayi*. I have specimens of *imberbe* before me the wing up to 56.6 mm. and others representing *ridgwayi* down to 53.0. The name *imberbe* is based on specimens from Vera Cruz, and birds from southern and eastern Mexico and Texas run

52-56.5, the average 54.5, as against 55.5 for *ridgwayi*. Series from Nicaragua and northwestern Costa Rica run 50-52, and it is here that we have a definitely slightly smaller bird. It seems to me, therefore, that the small southern extreme is more clearly separable from Vera Cruz topotypes than are Arizona birds. No one questions either the differences between the extremes, proved by ample series, or the partial intermediacy of Vera Cruz topotypes. Unfortunately there is no comparable series of sexed topotypes in existence, and we have yet to discover whether typical *imberbe* goes better with the larger northern or the small southern race. It seems to me that the recognition of *ridgwayi* could await this evidence.

The Beardless Flycatcher is apparently unrecorded in western Mexico between Jalisco and the interior of Oaxaca.

MYIOZETETES SIMILIS SUPERCILIOSUS (Bonaparte)

Acapulco, 1 ♂; Coyuca, 1 ♂.

These two specimens show a slight approach to *primulus* van Rossem of Sinaloa and Sonora, but are much nearer *superciliosus*.

PYROCEPHALUS RUBINUS MEXICANUS (Sclater)

Chilpancingo 6 ♂, 1 ♀.

With very large series before me, specimens from northern Sonora and Chihuahua, Lower California and Arizona have a wing which averages about 4 mm. shorter than examples from southern Texas, Tamaulipas, San Luis Potosi and Vera Cruz. In the latter state specimens from the east slope of the mountains approach *blatteus* in characters, while birds from Tabasco and Quintana Roo should be referred to *blatteus*. In which of these series of slight variables the type of *mexicanus* belongs still remains to be determined.

MYIOCHANES PERTINAX PERTINAX (Cabanis & Heine)

Chilpancingo, 4 ♂, July-Dec. 1931.

MYIOCHANES PERTINAX PALLIDIVENTRIS (Chapman)

Chilpancingo, 1 ♂, March 12, 1932.

One of the very few winter records of this subspecies.

MYIOCHANES VIRENS (Linnaeus)

Chilpancingo, 1 ♂, April 30, 1932.

Not previously reported from southwestern Mexico.

MYIOCHANES RICHARDSONII RICHARDSONII (Swainson)

Chilpancingo, 1 ♂, 5 ♀, May 23–July 7, 1931.

These are all slightly worn birds, and constitute a notable extension of the breeding range. In both size and color they do not show the slightest approach to *sordidulus*.

EMPIDONAX TRAILLII BREWSTERI Oberholser

Acapulco, 1 ♂, May 7, 1931; Chilpancingo, 1 ♀, April 30, 1932; Coyuca, 5 ♂, 5 ♀, Feb. 11–March 20, 1931.

EMPIDONAX MINIMUS (Baird)

Coyuca, 4 ♂, 3 ♀, Feb. 6–April 7, 1931; Chilpancingo, 2 ♂, 2 ♀, Oct. 13, 1931–Jan. 17, 1932; Acapulco, 1 ♀, Jan. 5, 1931.

EMPIDONAX HAMMONDI (Xantus)

Chilpancingo, 1 ♀, Nov. 15, 1931.

EMPIDONAX WRIGHTII Baird

Yautepec (Morelos), 1 ♀, Nov. 27, 1930; Taxco, 3 ♂, 1 ♀, Oct. 8–Nov. 10, 1930; Chilpancingo, 10 ♂, 8 ♀, Oct. 5, 1931–May 23, 1932.

Three of the Chilpancingo birds are noticeably paler both above and below, are of maximum dimensions, with distinctly longer and narrower bills. In other words they are exactly intermediate between *wrightii* and a series of *griscus* in fall plumage.

EMPIDONAX FULVIPECTUS PULVERIUS Brewster

Chilpancingo, 1 ♀, April 5, 1932.

This specimen confirms me in my belief that Guerrero birds are not true *fulvipectus* Lawrence, as recorded by Sclater & Salvin.

EMPIDONAX DIFFICILIS BAIRDI Sclater

Coyuca, 1 ♂, Jan. 29, 1931; Chilpancingo, 1 ♀, Oct. 27, 1931.

These two birds and another winter specimen recently received from Morelos increase the presumption that *salvini* Ridgway is nothing but the winter plumage of *difficilis bairdi* (Cf. Birds of Guatemala, p. 264).

EMPIDONAX ALBIGULARIS ALBIGULARIS Sclater & Salvin

Coyuca, 1 ♂, 2 ♀, Feb. 6–March 20, 1931.

These specimens confirm the characters ascribed to typical *albigularis*. They are in worn plumage, so that in color characters they resemble *E. t. traillii* to an astonishing degree, but can, of course, be separated by their very different proportions.

MYIARCHUS TYRANNULUS MAGISTER Ridgway

Chilpancingo, 3 ♂, 1 ♀, March 27–June 8; Coyuca, 1 ♂, Feb. 10.

MYIARCHUS TUBERCULIFER QUERULUS Nelson

Cacalotenango, 1 ♀; Acapulco, 2 ♂; Coyuca, 2 ♀; Chilpancingo, 5 ♂, 1 ♀.

Taken throughout the year, the series including breeding birds both from the lowlands and the mountains. The resident form.

MYIARCHUS TUBERCULIFER OLIVASCENS Ridgway

Coyuca, 4 ♂, 5 ♀, Jan. 15–March 17, 1931; Acapulco, 1 ♀, Dec. 30, 1930.

Apparently a common winter resident, previously obtained near Acapulco and Papayo (April 16). Easily separable from *querulus* in its much smaller size, and usually paler coloration.

MYIODYNASTES LUTEIVENTRIS LUTEIVENTRIS Sclater

Coyuca, 1 ♂, April 20, 1931.

MYIARCHUS CINERASCENS CINERASCENS (Lawrence)

MYIARCHUS CINERASCENS INQUIETUS Salvin & Godman

The relationships between *nuttingi*, *inquietus* and *cinerascens* prove to be so remarkable and so complicated that I have devoted nearly a

week to the careful study of the extensive material now available, but I am still unsatisfied as to the proper explanation.

In my recent Guatemala report I suggested that *inquietus*, previously treated as a northern subspecies of *nuttingi*, be reduced to synonymy. A year after this was written, I read Mr. van Rossem's report on his Sonora collections (Trans. San Diego Soc. Nat. Hist., 6, 1931, p. 260). Herein he announces the intergradation of *cinerascens* and *inquietus*, and regards the latter as racially distinct from *nuttingi*. The receipt of 67 specimens from Guerrero, and the re-examination of all other material in the Museum convinces me that this treatment is entirely permissible at the present time, though the facts presented below admit of an alternate explanation.

1. *Myiarchus cinerascens cinerascens* — a large, relatively pale bird, with the outer primary longer than the fourth, the upper tail coverts never rufescent in marked contrast to the back; tip of inner web of outer tail feathers sooty, sometimes extending down the shaft as a narrow streak, but always expanding abruptly terminally. Wing of males 98-105; females 92-100; the tail 5-7 mm. shorter than wing.

United States, 45 ♂, 25 ♀

Sonora, Oposura, breeding, 5 ♂, 2 ♀

“ La Chumeta, “ , 3 ♂, 2 ♀

“ Nacosari, March, 2 ♂

“ Opodepe, breeding, 1 ♂

“ Guaymas, winter, 4 ♂, 2 ♀

Sinaloa, Escuinapa, 1 ♀

Guerrero, Coyuca, 1 ♀

“ Taxco, 2 ♂

“ Naranjo, 1 ♂, 3 ♀

“ Chilpancingo, 3 ♂, 3 ♀

Guatemala, 2 ♂, 1 ♀

2. Birds exactly like typical *cinerascens* in every way, except that outer primary is *equal* to fourth; wing of males 96-100.

Sonora, Guaymas, winter, 1 ♂

Guerrero, Chilpancingo, breeding, 1 ♂ (wing 99)

“ “ winter, 2 ♂

“ Naranjo, “ 1 ♂, 1 ♀

“ Coyuca, “ 1 ♂, 3 ♀

“ Taxco, “ 1 ♀

“ Cacalotenango, “ 1 ♀

3. Birds exactly like typical *cinerascens*, but outer primary notably *shorter* than fourth

Sonora, Guaymas, winter, 1 ♂ , 1 ♀

4. Birds quite different from *cinerascens* in some respects; more olive brown; less grey above; the yellow of belly averaging deeper and the upper tail coverts strongly rufescent; outer primary always shorter than fourth; tail pattern exactly as in *cinerascens*; size smaller, wing, ♂ 88-97; ♀, 90.5-95. Guerrero, 8 ♂, 15 ♀, from various localities, including breeding birds from Chilpancingo.

5. Birds exactly like the last, but dusky area on tip of inner web of outer tail feather greatly reduced and not so abruptly expanded.

Guerrero, Chilpancingo, 3 ♀, breeding

6. Birds from Guerrero, the type locality, corresponding in every way to the original description of *inquietus*; differing from section 4 in averaging smaller, in having a dusky shaft stripe along inner web of outer tail feather for at least the terminal half, never abruptly expanded at tip and rarely wanting; size smaller, wing of ♂, 87-95; ♀, 82.5-89.

Guerrero, 8 ♂, 8 ♀ from Chilpancingo and Coyuca, including breeding adults and juveniles.

Sonora, Alamos, 4 ♂, 3 ♀, February and March.

Chihuahua, Carmen, 1 ♂, 1 ♀, November.

“ Durazno, 1 ♂, 1 ♀, fall.

“ Hacienda de San Rafael, 2 ♂, 1 ♀, 2 nestlings, late May.

Oaxaca, 10 ♂, 15 ♀, of which seven have no shaft stripe.

7. Much smaller birds, the majority with a dusky shaft stripe, nearest *nuttingi*; wing ♂, 82.5-85; ♀, 81-83.5.

Guatemala, Pacific slope, 3 ♂, 11 ♀.

8. Equally small birds with no dusky shaft stripes whatever; typical *nuttingi*.

Guatemala, arid interior 10 ♂, 6 ♀.

Nicaragua, breeding, 4 ♂, 4 ♀ (wing ♂ 84-87).

Costa Rica 3 ♂, 2 ♀ (wing ♂ 82-87).

It will be apparent to anyone who has followed the eight sections given above, that there is complete intergradation of characters from *cinerascens* to *nuttingi* in the ordinary sense. In the geographic sense, however, there is not, in that there is no geographic area occupied by intermediates in between the ranges of *cinerascens* and *inquietus*. The remarkable fact about my great series from Guerrero is that at Chilpancingo, practically the type locality for *inquietus*, *cinerascens*, *inquietus*, and three out of the four intermediate or connecting stages *all breed together*, and that the series of intermediates is far larger than of typical *inquietus*. Such anomalous facts as these strongly raise the presumption of hybridization of two different species. And yet I feel

that even more material and competent field experience above all is needed. It is not demonstrated beyond possibility that the worn, supposedly breeding birds in late May might not represent late spring stragglers. I should prefer to have a competent ornithologist, acquainted with the problem, collect in Guerrero during the breeding season and dissect a good series of specimens himself.

The series as a whole demonstrates the relative inconstancy of the tail markings, and I endorse the remarks previously made by Bangs and Peters and myself in impugning the subspecies *inquietus*, when based on this character alone. The dusky shaft stripe along the inner web of the outer primary is frequently absent in Oaxaca and Guerrero, and rarely even in Sonora. But van Rossem is entirely correct in the larger size of all birds from the Isthmus of Tehuantepec northward, and the name *inquietus* must apply to these birds.

There are further complications with the little known *Myiarchus brachyurus* Ridgway. In Costa Rica and Nicaragua, where Miller and I collected a good series of breeding birds of both species, it is apparent that there are two species occurring together. The small one is of course *nuttingi*, but *brachyurus* sex for sex, proves to be absolutely larger, with a much shorter tail in proportion. This shows convincingly only in a table of individual measurements, but roughly speaking the tail of any *nuttingi* is about 5 mm. shorter than its wing, and the tail of any *brachyurus* is 10-12 mm. shorter than the wing. Mr. Ridgway did not appreciate this point in his treatment of *brachyurus*. It follows that the large *inquietus* in western Mexico have a wing length every bit as big as *brachyurus* in Nicaragua, and they are distinguishable only in their proportionately longer tails. It also follows that old records of *brachyurus* north to Chiapas require checking.

I have carefully measured the tail length of every specimen listed above from Mexico, and there is none in which the tail is sufficiently short proportionately to be *brachyurus*. On the other hand the great majority of specimens, including even typical *cinerascens*, have tails which average 7-8 mm. shorter than the wing. This in part at least nullifies the absolute differences in proportions so readily discernible in Central America. I am equally at a loss how to express this added factor taxonomically.

TYRANNUS VERTICALIS Say

Chilpancingo, 8 ♂, 9 ♀, Oct. 22-May 19; Iguala, Nov. 5, 1930.

There is only one mid-winter specimen, so I presume that the majority of individuals of this species proceed further south.

TYRANNUS VOCIFERANS VOCIFERANS Swainson

Chilpancingo, 4 ♂, 4 ♀, Oct. 21–April 17.

Several of these specimens are quite typical of northern Cassin's Kingbird, but several are intermediate and may well represent the breeding bird of Durango and Jalisco.

TYRANNUS VOCIFERANS XENOPTERUM subsp. nov.

Type. No. 163725, Mus. Comp. Zoöl., ♂ ad., Chilpancingo, Guerrero; June 29, 1931; W. W. Brown.

Characters. Differing from typical *vociferans* in averaging slightly smaller, upperparts slightly darker and less olive green, more grey; throat darker and greyer, in sharper contrast with the whiter throat and yellow abdomen; female without any emargination on the outer primaries, the male with only 4 outer primaries distinctly emarginate, far less incised and never so abruptly in fully adult breeding birds.

Measurements of wing. *Vociferans*, large series, ♂ 130–137 (133); ♀ 121–131.5 (126.5); *xenopterum*, 6 ♂ 126.5–130.5 (129); 6 ♀, 119–124 (122).

Remarks. The discovery that Cassin's Kingbird breeds south to Guerrero is an interesting range extension. Of my twelve specimens, eight were collected in late May, June and early July. The other four are fall and winter specimens, showing that the race is resident in part at least. Typical *vociferans* is based on winter migrants in the Valley of Mexico, where there is no evidence whatever that the bird breeds. The new form is abundantly distinct.

TYRANNUS MELANCHOLICUS OCCIDENTALIS Hartert & Goodson .

Acapulco, 1 ♂, 1 ♀; Coyuca, 1 ♂, 3 ♀; Chilpancingo, 1 ♀; all seasons.

TYRANNUS CRASSIROSTRIS CRASSIROSTRIS Swainson

Coyuca, 1 ♂, 5 ♀; Acapulco, 3 ♀; Chilpancingo, 4 ♂, 7 ♀, breeding series and late October only.

These birds are all clearly *crassirostris* in color, but average slightly smaller than Oaxaca specimens.

TYRANNUS CRASSIROSTRIS POMPALIS Bangs & Peters

Chilpancingo, 1 ♂, March 14, 1932.

Clearly the northern form in color and size. Undoubtedly a migrant.

FAMILY HIRUNDINIDAE

TACHYCINETA THALASSINA LEPIDA Mearns

Chilpancingo, 2 ♂, Dec. 3 and 11, 1931.

STELGIDOPTERYX RUFICOLLIS SALVINI Ridgway

Chilpancingo, 2 ♂, 1 ♀, April 30 and May 26; wings of ♂ 116.5 and 119 mm.

These birds are really intermediate between *salvini* and *serripennis*, but are referred here on the basis of their longer wings, the most trenchant character in breeding birds.

STELGIDOPTERYX RUFICOLLIS SERRIPENNIS (Audubon)

Coyuca, 2 ♂, 2 ♀, March 17–April.

These are surprising birds and doubtfully referred to *serripennis*. All four are slightly darker than specimens from the eastern United States, and their measurements run below the minimum record for *serripennis*. One suspects the possibility of a local breeding race.

FAMILY CORVIDAE

CALOCITTA FORMOSA FORMOSA (Swainson)

Coyuca, 7 ♂, 3 ♀, Pié de la Cuesta, 1 ♂; Acapulco, 2 ♂, 2 ♀.

CISSILOPHA SAN-BLASIANA PULCHRA Nelson

Coyuca, 6 ♂, 6 ♀; Acapulco, 3 ♂, 1 ♀.

APHELOCOMA CALIFORNICA REMOTA subsp. nov.

Type. No. 163815, Mus. Comp. Zoöl., ♀ ad.; Chilpancingo, Guerrero, Mexico; Oct. 27, 1931; W. W. Brown.

Characters. In part connecting *sumichrasti* Ridgway with *grisea* Nelson, in other respects different from any known Mexican subspecies of the group; head and neck light cerulean blue, not dull azure as in *cyanotis*, *sumichrasti* and *texana*, nor greyish cerulean as in *grisea*; back hair brown abruptly contrasted with blue of hind neck, as in *sumichrasti*, but unique in having lighter shaft streaks; superciliary stripe

about as in *cyanotis* and *sumichrasti*; loreal, orbital and auricular regions velvety black in sharp contrast with adjacent blue areas, a unique character; underparts whiter even than in *texana* and *sumichrasti*, with fainter streaking on throat and a barely perceptible wash of faint greyish brown on chest and sides, in this respect one extreme of the group; size large as in *sumichrasti*.

This very distinct new form is based on twenty-four specimens from the type locality, the great majority being breeding adults or young of the year. It is quite surprising to find that no member of this group of the genus *Aphelocoma* is recorded from Guerrero.

A few years ago the new form would have been treated as a species. I entirely agree with Oberholser, however, that *cyanotis*, *grisca* and *sumichrasti* are best treated as representatives of *californica* (cf. Condor, 1917, pp. 94-95).

CYANOCITTA STELLERI CORONATA (Swainson)

Chilpancingo, 8 ♂, 9 ♀, throughout the year.

This fine series does not differ constantly in color from *coronata* from Vera Cruz, but averages about 4 mm. shorter in the wing, not a sufficient difference for taxonomic separation.

FAMILY SITTIDAE

SITTA CAROLINENSIS MEXICANA Nelson & Palmer

Chilpancingo, 1 ♂, 1 ♀, April and May 19.

FAMILY CERTHIIDAE

CERTHIA FAMILIARIS JALISCENSIS Miller & Griscom

Chilpancingo, 1 ♂, 1 ♀, 1 juv., breeding season.

The only adult male is browner above and very small compared to *alticola*. The Creeper is previously unknown in Guerrero.

FAMILY TROGLODYTIDAE

HELEODYTES CAPISTRATUS HUMILIS (Sclater)

Acapulco, 4 ♂, 7 ♀; Coyuca, 6 ♂, 5 ♀.

A remarkably variable bird in the amount and intensity of rufous on the back. A long series from Oaxaca are apparently greyer, less rufous above, but they are not seasonably comparable. I cannot regard *humilis* as specifically distinct from the *capistratus-rufinucha* group.

HELEODYTES JOCOSUS JOCOSUS (Sclater)

Chilpancingo, 11 ♂, 10 ♀.

I have no topotypes from Oaxaca to compare with this fine series, but Ridgway found no differences. I do not consider *gularis* (Sclater) of northwestern Mexico specifically distinct.

PHEUGOPEDIUS FELIX FELIX (Sclater)

Coyuca, 1 ♂, 1 ♀.

PHEUGOPEDIUS FELIX PALLIDUS (Nelson)

Chilpancingo, 5 ♂, 4 ♀.

These birds from the interior are noticeably paler and greyer, even in fresh plumage, than Coyuca and Oaxaca specimens, and agree with a specimen from Tepic, which presumably represents *pallidus*.

TROGLODYTES AEDON PARKMANII Audubon

Taxco, 1 ♀, Oct. 16, 1930; Chilpancingo, 4 ♂, Dec. 19–April 5, 1932.

TROGLODYTES BRUNNEICOLLIS BRUNNEICOLLIS (Sclater)

Chilpancingo, 1 ♂.

This montane wren is not well represented in most collections, and the large series in this museum has never been worked up, in default of adequate material of typical *brunneicollis*. Thanks to the authorities of the American Museum of Natural History in New York I have before me a series from Vera Cruz, Puebla and Mexico, and interesting variations become evident. Subspecific variation takes the usual form in Mexican birds and would appear to be approximately as follows.

1. Typical *brunneicollis* Sclater is a richly colored extreme of southeastern Mexico (Mexico, Puebla, Vera Cruz, Oaxaca¹). The upper-

¹ I have not seen the race *nitidus* Nelson from the humid forests of Mt. Zempoaltepec, north-eastern Oaxaca, described as being darker and more richly colored than typical *brunneicollis* from near Oaxaca City.

parts are rich broccoli to mars brown, distinctly rufescent on rump and upper tail-coverts; there are very small, mostly concealed, white spots on the lesser wing coverts; throat and breast rich cinnamon-buff in more or less sharp contrast with the nearly white center of abdomen; barring on flanks and abdomen sharply contrasted, black and white; 12 specimens examined. The Guerrero specimen is markedly greyer and duller brown above, thus partially approaching the next race.

2. *Troglodytes brunneicollis compositus* subsp. nov.

Type. No. 49657, Mus. Comp. Zoöl.; ♂ ad.; Galindo, Tamaulipas, Mexico; March 25, 1909; F. B. Armstrong.

Characters. Duller and paler than typical *brunneicollis*; upperparts nearest Prout's brown, greyer on the pileum, but rump distinctly rufescent; underparts more uniform, dull cinnamon on throat and breast, the center of abdomen less white; barring on flanks and abdomen duller, less contrasted black and white.

Material. 18 specimens from Tamaulipas, San Luis Potosi and Nuevo Leon. A specimen from Monterey, Nuevo Leon approaches typical *brunneicollis* is being warmer brown above.

3. *Cahooni* Brewster. Still paler and duller; greyish brown above, inclining to mars brown on the rump; spots on lesser wings coverts larger and more abundant; pale cinnamon below, whitish again on center of abdomen; barring on flanks and abdomen much fainter and duller. 60 specimens from Sonora and Chihuahua. A specimen from Jalisco is intermediate. Immature birds of all three races are more richly colored than adults, but differ relatively in the same respects.

HENICORHINA LEUCOPHRYS FESTIVA Nelson

Chilpancingo, 1 ♀.

SALPINCTES OBSOLETUS OBSOLETUS (Say)

Chilpancingo, 6 ♂, 11 ♀, throughout the year; Taxco, 1 ♂.

As mentioned in my Guatemala report, I am unable to recognize a Mexican race *notius* Ridgway.

CATHERPES MEXICANUS MEXICANUS (Swainson)

Chilpancingo, 2 ♂, 1 ♀; Taxco, 1 ♀.

FAMILY MIMIDAE

TOXOSTOMA CURVIROSTRE CURVIROSTRE (Swainson)

Chilpancingo, 1 ♂.

MELANOTIS CAERULESCENS EFFUTICIUS Bangs & Penard

Chilpancingo, 8 ♂, 6 ♀.

This series is slightly intermediate, but on the whole nearer the pale northwestern race. Birds from Vera Cruz are the other extreme of dark and dull coloration, but topotypes are not so extreme.

MIMUS POLYGLOTTOS LEUCOPTERUS (Vigors)

Acapulco, 1 ♂; Chilpancingo, 7 ♂, 22 ♀, Oct. 5–April 26.

FAMILY TURDIDAE

MYADESTES OBSCURUS OCCIDENTALIS Stejneger

Chilpancingo, 1 ♀.

Ridgway refers the Guerrero bird to typical *obscurus*, but as I understand the races (cf. *Birds of Guatemala*, p. 303), the specimen listed above is typical of *occidentalis*.

TURDUS RUFO-PALLIATUS Lafresnaye

Coyuca, 1 ♂, 2 ♀.

TURDUS ASSIMILIS RENOMINATUS Miller & Griscom

Chilpancingo, 6 ♂, 2 ♀.

TURDUS MIGRATORIUS PERMIXTUS subsp. nov.

Type. No. 163992, Mus. Comp. Zoöl.; ♂ ad., breeding; Guerrero, Chilpancingo (8,000 ft.); March 25, 1932; W. W. Brown.

Characters. Resembling *phillipsi* Bangs of eastern Mexico in averaging smaller than *propinquus*; differing radically in color from both in being much blacker (♂) or slatier (♀) above, and below deeper cinnamon-rufous (♂) or more rufous, less ochraceous (♀); in color almost

exactly like the dark extreme of typical *migratorius* from northeastern North America and approximating it in size, but immediately separable by the absence of the white tail spots.

Remarks. This very distinct race is represented by three males and eight females, the majority of them taken in May and June. A table of wing measurements is appended below.

	♂	♀
<i>propinquus</i> — Rocky Mts.	135-148 (142)	130-138 (135)
“ — N. W. Mexico	138-142 (140.3)	131-135 (133)
<i>phillipsi</i> — type series	132-133 (132.5)	123.5-132 (127.5)
<i>permixtus</i> — Guerrero	133.5-136.5 (134.7)	127-134 (130)

HYLOCICHLA GUTTATA AUDUBONI (Baird)

Taxco, 2 ♂ (wing 100.5 & 102) Oct. 16 & 17, 1930; Chilpancingo, 1 ♂ (wing 104), Nov. 11, 1931.

CATHARUS OCCIDENTALIS FULVESCENS Nelson

Chilpancingo, 1 ♂, 2 ♀, breeding.

CATHARUS MELPOMENE CLARUS Jouy

Chilpancingo, 4 ♂, 4 ♀, May-August.

The Mexican races of this thrush are unsatisfactory. The situation is precisely like that in *Myadestes obscurus*, and many other species. The darkest and most russet birds (typical *melpomene*) are from Vera Cruz. The palest extreme is in northwestern Mexico in Chihuahua. Birds from San Luis Potosi, Mexico, Morelos, Guerrero and Jalisco are exactly intermediate, and it is to these that the name *clarus* applies. Unlike the *Myadestes*, however, the extremes are not so strikingly distinct, and I do not believe that the formal separation of Chihuahua specimens of *Catharus melpomene* is necessary or advisable.

SIALIA SIALIS FULVA Brewster

Chilpancingo, 1 ♂, March 20, 1932.

Presumably some form of Bluebird breeds in the mountains of Guerrero, but no specimens are on record. In so critical a group of subspecies, the determination of a single specimen is provisional only. I refer this bird to *fulva*, as it agrees with that race in size, in being more azure blue above, and in having the underparts extensively

cinnamon rufous in little contrast with the white belly. The cinnamon rufous is not however, as pale as in *azurea*, but it is not as dark as in *guatemalae*.

RIDGWAYIA PINICOLA (Sclater)

Chilpancingo, 3 ♂, 2 ♀, March–May.

The discovery of this species in Guerrero is a distinct range extension for this little known bird.

FAMILY SYLVIIDAE

CORTHYLIO CALENDULA CALENDULA (Linnaeus)

Chilpancingo, 1 ♀, Nov. 15, 1931; Taxco, 1 ♀, Nov. 15, 1930.

POLIOPTILA CAERULEA CAERULEA (Linnaeus)

Chilpancingo, 1 ♂, Feb. 2, 1932; Taxco, 1 ♀, Oct. 10, 1930.

POLIOPTILA BILINEATA NIGRICEPS Baird

Chilpancingo, 1 ♂, 1 ♀, Aug. 25 & Oct. 10, 1931; Coyuca, 1 ♂, Jan. 15.

FAMILY PTILOGONATIDAE

PTILOGONYS CINEREUS PALLESCENS subsp. nov.

Type. No. 164037, Mus. Comp. Zoöl.; ♂ ad.; Chilpancingo (8,000 ft.), Guerrero, Mexico; Nov. 25, 1931; W. W. Brown.

Characters. Similar to typical *cinereus* of Mexico and Vera Cruz, but paler and greyer throughout; male with supraloral, chin and throat greyish white, never brownish white; auricular region and nuchal collar greyer, less brown; slightly paler and clearer grey both above and below; female with cap and throat greyer, less drab, more sharply contrasted with back and breast; above and below averaging paler and less brown, the darkest specimens about like the palest Vera Cruz specimens; rump averaging lighter than back and upper tail coverts darker than in typical form.

Remarks. This new race is founded on 5 ♂ and 8 ♀. Specimens collected from October–December are in fresh plumage, those from April to May variously worn. In making comparisons care must be

used to contrast similar plumages. When this is done, the characters of the new form are readily appreciable in series. A specimen from Jalisco is distinctly intermediate.

FAMILY VIREONIDAE

VIREO FLAVOVIRIDIS FLAVOVIRIDIS (Cassin)

Chilpancingo (5,000–8,000 ft.), 2 ♂, 1 ♀, April 5–May 25.

These birds are of some interest, as in color characters they are *forreri* of the Tres Marias Islands. In size, however, they are well below the minimum recorded for this form.

VIREO GILVUS SWAINSONII Baird

Chilpancingo, 2 ♂ 2 ♀, Oct. 1–March 20.

VIREO SOLITARIUS CASSINI Xantus

Taxco, 2 ♂, 1 ♀, Oct. 10–25; Cacalotenango, 1 ♂, Nov. 10; Chilpancingo, 1 ♂, Jan. 7.

VIREO SOLITARIUS PLUMBEUS Coues

Chilpancingo, 1 ♂, April 20, worn breeding bird.

VIREO HYPOCHRYSEUS HYPOCHRYSEUS Sclater

Chilpancingo, 11 ♂, 6 ♀, Taxco, 2 ♂, April 14 to Oct. 11.

One of these Taxco specimens has a remarkably deformed or abnormal bill, in that both upper and lower mandible are strongly decurved beyond the middle, producing a markedly curved bill like a sickle.

VIREO BELLII BELLII Audubon

Chilpancingo, 1 ♂, Feb. 15; Coyuca, 3 ♂, 4 ♀, Jan. 26–April 15, 1931.

FAMILY VIREOLANIIDAE

VIREOLANIUS MELITOPHRYS GOLDMANI Nelson

Chilpancingo, 1 ♂, May 11, 1932.

In default of topotypical material, the subspecific determination is tentative only.

FAMILY COEREBIDAE

DIGLOSSA BARITULA BARITULA Wagler

Chilpancingo, 1 ♂, April 30, 1932.

FAMILY MNIOTILTIDAE

MNIOTILTA VARIA (Linnaeus)

Coyuca, 1 ♀, Jan. 15; Chilpancingo, 1 ♂, Nov. 29.

VERMIVORA CELATA LUTESCENS Ridgway

Taxco, 1 ♂, Oct. 22, 1930; Coyuca, 1 ♂, Feb. 27; Chilpancingo, 1 ♂, 3 ♀
Jan. 4–March 8.

These birds are by no means typical of *lutescens*, and should be referred to *orestera*, were that race ever recognized.

VERMIVORA RUFICAPILLA RUFICAPILLA (Wilson)

Chilpancingo, 1 ♀, Oct. 15, 1931.

VERMIVORA RUFICAPILLA RIDGWAYI van Rossem

Coyuca, 1 ♂, Jan. 26; Chilpancingo, 2 ♀, Nov. 29–March 5.

VERMIVORA VIRGINIAE (Baird)

Chilpancingo, 3 ♀, Feb. 7–March 27, 1932.

The furthest south this species has ever been recorded.

DENDROICA AESTIVA AESTIVA (Gmelin)

Chilpancingo, 2 ♂, April 5, 1932.

DENDROICA AESTIVA BREWSTERI Grinnell

Chilpancingo, 3 ♂, 1 ♀; Pié de la Cuesta, 1 ♂; Coyuca, 1 ♂, 2 ♀; Dec. 11–
May 7.

DENDROICA AESTIVA SONORANA Brewster

Coyuca, 2 ♀, Chilpancingo, 1 ♀, Nov. 25–March 11.

DENDROICA AUDUBONI AUDUBONI (Townsend)

Coyuca, 1 ♂, 1 ♀; Chilpancingo, 1 ♂, 2 ♀, Taxco, 3 ♀; Oct. 9–Jan. 15.

DENDROICA DOMINICA ALBILORA Ridgway

Acapulco, 1 ♂, Dec. 20, 1931.

DENDROICA NIGRESCENS (Townsend)

Chilpancingo, 2 ♂, 1 ♀; Taxco, 1 ♂, 2 ♀; Oct. 1–Dec. 21.

DENDROICA OCCIDENTALIS (J. K. Townsend)

Taxco, 1 ♀, Oct. 10.

DENDROICA TOWNSENDI (J. K. Townsend)

Taxco, 3 ♂, 1 ♀; Chilpancingo, 2 ♀; Oct. 9–Nov. 11.

OPORORNIS TOLMIEI (Townsend)

Chilpancingo, 3 ♂, 3 ♀; Coyuca, 1 ♂, 5 ♀; Oct. 1–April 1.

GEOTHLYPIS TRICHAS OCCIDENTALIS Brewster

Coyuca, 1 ♂, Feb. 11.

ICTERIA VIRENS VIRENS (Linnaeus)

Coyuca, 3 ♂, 2 ♀; Acapulco, 1 ♀; Jan. 7–April 20.

Four of these birds are intermediate in being greyer, less green above or in having longer tails.

ICTERIA VIRENS LONGICAUDA (Lawrence)

Acapulco, 1 ♀, May 4; Coyuca, 1 ♂, Feb. 18.

WILSONIA PUSILLA PILEOLATA (Pallas)

Taxco, 1 ♂, 1 ♀; Chilpancingo, 1 ♂, 1 ♀; Sept. 29–Dec. 31.

SETOPHAGA PICTA PICTA (Swainson)

Chilpancingo, 2 ♂, June & September.

ERGATICUS RUBER (Swainson)

Chilpancingo, 1 ♂, June 9.

EUTHLYPIS LACHRYMOSA Cabanis

Chilpancingo, 3 ♂, 3 ♀; Cacalatenango, 1 ♂; May to October.

The excellent series before me fully endorses Mr. van Rossem's recent criticism of the race *tephra* Ridgway, which I regard as a pure synonym of *lachrymosa*. (cf. Trans. San Diego Soc. Nat. Hist., 6, No. 19, 1931, p. 286).

BASILEUTERUS RUFIFRONS DUGESI Ridgway

Chilpancingo, 15 ♂, 12 ♀, throughout the year.

FAMILY ICTERIDAE

CASSICULUS MELANICTERUS (Bonaparte)

Acapulco, 1 ♂, 1 ♀; Coyuca, 2 ♂, 4 ♀.

TANGAVIUS AENEUS ASSIMILIS (Nelson)

Chilpancingo, 5 ♂, 4 ♀; Coyuca, 1 ♀.

MOLOTHRUS ATER ARTEMISIAE Grinnell

Tixtla 1 ♂, 1 ♀; Chilpancingo, 1 ♂, 6 ♀; Dec. 10–March 17.

MOLOTHRUS ATER OBSCURUS (Gmelin)

Tixtla, 5 ♂, 2 ♀; Chilpancingo, 12 ♂, 10 ♀; Dec. 21–April 17.

CASSIDIX MEXICANUS OBSCURUS (Nelson)

Chilpancingo, 6 ♂, 3 ♀.

STURNELLA MAGNA ALTICOLA Nelson

Chilpancingo, 2 ♂, 2 ♀, March–May 25.

A Review of the Middle American Meadowlarks

For some years the status of the various proposed races of Neotropical Meadowlarks has been in doubt and confusion. Dr. Chapman has recently (*Bird-Life of Mts. Roraima and Duida*, pp. 133-135) proposed a tentative but most workable review of the South American races, emphasizing the elusive nature of subspecific variation, complicated by great seasonal variation. These comments apply with equal force to the Middle American forms. Small series of *Sturnella* from various parts of Mexico and Central America have gradually been accumulating in the great eastern museums, and the time has now come, when a revision could be attempted with reasonable hope of improving current conceptions or at least clarifying certain issues of fact. Outram Bangs and I commenced this review in August, 1932, and proceeded as far as we could go without the re-examination of critical specimens or series in other museums. Among the last things my late colleague did was to borrow this material from the American Museum in New York and the Carnegie Museum in Pittsburg. While he did not live to examine it, thanks is hereby extended to the authorities in charge of these collections for their courteous assistance.

For Middle American Meadowlarks three names are available at present. Of these the oldest is *mexicana* Sclater, based primarily on birds collected by De Oca at Jalapa, Vera Cruz, although Sclater also included specimens from Cordova and Orizaba. If, then, any question arises as to just what *mexicana* is, in default of the type, topotypes collected by De Oca must be used. Fortunately the American Museum possesses two. In 1888 Ridgway received specimens from the Segovia River. They proved to be very small, and were described as *inexpectata*. In the meantime specimens were accumulating from the highlands of Mexico. These birds proved to be relatively very large, and in 1900 Nelson described them as *alticola*, the type from the mountains of Chiapas. Unfortunately he did not compare it with *mexicana*, to which it is exceedingly close, but to typical *magna*, from which, of course, it is very different. When Ridgway reviewed *Sturnella* in 1902 (*Birds of N. & Mid. Amer.*, pt. 2), he was unable "satisfactorily to make out Mr. Nelson's *alticola*," and called all large highland birds *mexicana*, and all small birds from the Caribbean lowlands *inexpectata*. In 1932 when reporting on the meadowlarks of Guatemala (*Birds of Guatemala*, p. 389), I gave a table of measurements of such specimens as I had examined in New York and Cambridge. This table, reproduced beyond, shows very clearly that topotypes of *mexicana* from

5,000 ft. on the eastern slope of the Mexican plateau are intermediate between the small lowland birds and the generally large bird of the highlands. As, however, the size of Jalapa birds was nearer the maximum for lowland birds than the minimum for highland birds, I suggested that the name *mexicana* could be applied to the lowland form and *alticola* was available for the highland form. We had here then one of those inconvenient cases where the oldest name proves to be based on an intermediate, and where its application to one or another well marked extreme must be arbitrary and always open to criticism.

Most fortunately, however, the present study has brought out additional characters, which obviate the necessity of treating either *alticola* or *inexpectata* as a synonym of *mexicana*. The tail pattern of east Mexican birds proves to differ from that of true *inexpectata* and *alticola*, and on this basis the slightly larger size of Jalapa topotypes can be waived. I distinguish the following races.

1. *Sturnella magna mexicana* Sclater. Type locality, Jalapa (5,000 ft.), eastern slope of the mountains of Vera Cruz. Inhabits the lowlands of Vera Cruz, Oaxaca and Chiapas. Freely intergrading with *alticola* at medium altitudes. A relatively small race with short blunt culmen and long slender legs and long tail; three outer tail feathers with a short dusky streak near end of outer web; fourth tail feather with far more white than dusky on inner web; wing of males 99.6-108.5, the exposed culmen 19-21; the tail 66-70.5; the tarsus 43-46.

2. *Sturnella magna* subsp. Rio Lagartos, arid tip of Yucatan Peninsula. The Meadowlark is previously unrecorded from any part of the Yucatan Peninsula. The single adult ♂ is notably paler and duller yellow below than any other Middle American Meadowlark in equally or more worn plumage. I prefer to see this difference confirmed by other specimens. In other respects exactly resembling *mexicana*.

3. *Sturnella magna inexpectata* Ridgway. Type locality, Segovia River, Honduras. Inhabits the local pine land savannas of the Caribbean lowlands from (Peten?), British Honduras to northeastern Nicaragua. A very small race, in proportions similar to *mexicana*. Sides of chest averaging more heavily spotted rather than streaked. Third rectrix with much dusky on inner web, often the feather half and half dusky and white; fourth rectrix with far more dusky than white, the white often reduced to a narrow shaft stripe. Wing 96.5-105.5.

4. *Sturnella magna alticola* Nelson. Type locality, Ocuilapa, Chiapas. Inhabits the southern end of the Mexican Plateau at higher altitudes, east to western Vera Cruz (Mt. Orizaba), north perhaps to Jalisco

and Tepic; south through the highlands of Central America to Costa Rica. Size relatively large, but proportions similar to *mexicana*. Tail pattern as in *mexicana*, but averaging even more white, the outer webs of the outer feathers often devoid of any terminal dusky streak or this greatly reduced. This subspecies is by no means uniform throughout its range. Birds from Chiapas, Oaxaca and Vera Cruz southward are as dark as *mexicana* in general coloration. Birds from western and northwestern Mexico are the largest, slightly paler above and tend to have more white in the tail feathers. The very largest birds come from northwestern Mexico, the very smallest from Nicaragua and Costa Rica. Lack of material prevents me from discussing the relations of northwestern specimens (presumably *lilianae*) to *hoopesi* of the Mexican border. For measurements, see table. In Nicaragua and Honduras, this race intergrades eastward with *inexpectata*. A ♂ before me from Comoapa, Nicaragua (2,600 ft.) is such a specimen, the wing 106 and the tail feathers with more dusky than *alticola*, but more white than *inexpectata*.

5. *Sturnella magna subulata* subsp. nov. Type, No. 109448, Mus. Comp. Zoöl.; ♂ ad.; Boquete (4,000 ft.), Pacific slope of Chiriqui, western Panama; Jan. 30, 1901; W. W. Brown. Inhabits the savannahs of the Pacific slope of Chiriqui and Veraguas to Agua Dulce. Size very small and coloration dark as in *inexpectata*, consequently abruptly smaller than *alticola*; minutely deeper and richer yellow below than *alticola*; juvenals with far more wash of a darker brown below; tail feather pattern as in *alticola*, consequently with far more white than *inexpectata*; proportions quite different from *inexpectata* and the other subspecies, the tail and tarsus shorter, the bill longer and more slender, the mandible with a subulate and more pointed tip; wing 97-103; tail 61.5-66.5; tarsus 41-43; exposed culmen 21.5-25. Some time ago I provisionally referred these birds to *paralios* Bangs of Santa Marta. As the latter race is now understood, they prove to be quite different.

6. *Sturnella magna meridionalis* Selater. Type locality, Bogotá Savanna, Colombia. Resembling *alticola* in large size and dark coloration, but light tips and edges to feathers of hind neck greyish or whitish instead of buffy; black jugular crescent broader; bill 3-5 mm. longer; tail pattern as in *inexpectata*, consequently much darker than in *alticola*.

7. *Sturnella magna paralios* Bangs. Type locality, San Sebastian, 6,000 ft., Santa Marta, Colombia. Radically different from any other race discussed so far in being paler and browner above, with less black

to the centers of the feathers; the crown stripes chiefly dark brown instead of chiefly blackish; hind neck buffy as in the Central American races; size slightly smaller than *alticola* and *meridionalis*, much larger than *subulata*, wing 107-110; the bill shorter than in *meridionalis*; radically different from all previous races in having more white in the tail even than *alticola*, the *fifth* feather from the outermost always with some white.

8. *Sturnella magna praticola* Chubb. Type locality, Abary River, British Guiana. Resembling *parabios*, but much smaller, the inner web of third rectrix from without always with some grey or dusky on inner margin, at least for basal half.

I have given here brief diagnoses of some of the South American races, as no one has previously contrasted any of them with the Central American forms. Geographically the nearest South American meadowlarks to *subulata* are in northern Colombia. I have before me 4 from Boyaca and 13 from the lower Magdalena, kindly loaned by the Carnegie Museum. These birds in general coloration and size resemble *parabios*, but the tail feather formula is that of *praticola*. It is obviously a matter of opinion to which race to refer them, but I agree with Todd in calling them *parabios*. In the first place there are only 4 authentic males of *parabios*, and further specimens might produce smaller birds with some dusky on the third tail feather. In the second, to call these birds *praticola* would give that race a remarkably discontinuous range.

Wing Measurements of Males

topotypes of <i>mexicana</i> Selater ¹	105-108.5 collected at Jalapa by De Oca
type of <i>alticola</i> Nelson	113, highlands of Chiapas
topotypes of <i>inexpectata</i>	96.5 from Segovia River, east Nicaragua
10 Vera Cruz lowlands ¹	99.6-103.5 (102.6) = <i>mexicana</i>
5 Chiapas lowlands	101.5 = <i>mexicana</i>
5 British Honduras	99-105.5 = <i>inexpectata</i>
6 highlands of eastern Mexico	115.6 = <i>alticola</i>
3 Jalisco ¹ & Tepic	114-118 = subsp.?
2 Guerrero	113-114 = <i>alticola</i>
1 Oaxaca	109 = intergrade with <i>mexicana</i>
5 from western Mexico	116.3 <i>alticola</i> or <i>lilianae</i>
3 western Guatemala ¹	112-114 = <i>alticola</i>
3 central Honduras	111-114 = <i>alticola</i>
4 north central Nicaragua ¹	108.2-113 = <i>alticola</i>

¹ American Museum of Natural History.

1 Comoapa, Nicaragua	106 = intergrade with <i>inexpectata</i>
9 Costa Rica	108-116 (111.3) = <i>alticola</i>
8 from western Panama	97-103 = <i>subulata</i>
3 Santa Marta	107-110 = <i>parabios</i>
19 Bogota & Santander ¹	111-118 = <i>meridionalis</i>
5 lower Orinoco	97-103 (fide Chapman = <i>praticola</i>)
11 lower Magdalena ¹	113-118, one very small bird probably a ♀

ICTERUS BULLOCKII (Swainson)

Taxco, 1 ♂, 1 ♀; Chilpancingo, 21 ♂, 4 ♀, Oct. 7-April 7.

ICTERUS SPURIUS (Linnaeus)

Acapulco, 1 ♂, 2 ♀; Coyuca 2 ♂, 3 ♀; Chilpancingo, 4 ♂, 1 ♀; Nov. 15-May 7.

ICTERUS WAGLERI WAGLERI Sclater

Chilpancingo, 4 ♂, 7 ♀.

These birds, like all other specimens from western Mexico examined, are typical *wagleri* in color, but approach *castaneopectus* Brewster of northwestern Mexico in size.

ICTERUS PARISORUM Bonaparte

Chilpancingo, 7 ♂, Dec. 1-March 25.

ICTERUS CUCULLATUS CUCULLATUS Swainson

Taxco, 1 ♂; Chilpancingo, 9 ♂, 1 ♀, Oct. 5-March 15.

Not previously recorded southwest of Morelos.

ICTERUS CUCULLATUS SENNETTI Ridgway

Taxco, 1 ♀, Nov. 1, 1930.

Obviously this subspecies in its duller paler coloration and shorter wing and tail. It has already been recorded from Yautepec, Morelos, on the Guerrero border.

¹ Carnegie Museum.

ICTERUS CUCULLATUS CALIFORNICUS (Lesson)

1 ♀, Chilpancingo, Feb. 7, 1932.

A typical and characteristic specimen of this race, which is unrecorded to date south of Tepic. For the use of this name see beyond under *pustulatus*.

ICTERUS GULARIS GULARIS (Wagler)

Coyuca, 1 ♀, Feb. 10.

An interesting range extension, the species previously unknown north of Oaxaca.

ICTERUS PUSTULATUS MICROSTICTUS subsp. nov.

Type. No. 114624, Mus. Comp. Zoöl.; ♂ ad.; Sonora, Guaymas; Feb. 22, 1905; W. W. Brown.

Characters. Differing from typical *pustulatus* (Wagler) in having the spotting on the back greatly decreased in adult males, small narrow lance-ovate ones instead of large round spots; this decrease in spotting equally evident in females, which are so small as to be very obscure.

Material Examined—*pustulatus*, 20 ♂, 11 ♀ from Morelos, Guerrero & Colima; *microstictus*, 20 ♂, 12 ♀ from Jalisco, Sinaloa and Sonora.

Remarks. The discovery that there were two strongly marked subspecies of *pustulatus* raised the question as to which one Wagler's type belonged. It was quite impossible to tell from the original description, which incidentally gave no locality, and there was no point in guessing, as the type was among the many treasures of the Berlin Museum. Accordingly I sent a typical adult male of each form to Dr. Stresemann, who very kindly made the necessary comparisons. My friend Mr. van Rossem has since been in Berlin and has also examined the original specimens. There prove to be three cotypes from Cuernavaca and San Mateo, collected by Deppe, and all are unquestionably the large spotted southern form.

In this connection we must consider *Pendulinus californicus* Lesson from California (Rev. Zoöl., 1844, p. 436). This name has always been regarded as a synonym of *pustulatus*, notably by Sclater and Ridgway, the locality supposedly an error, as was so frequently the case with Lesson's middle American birds. A study of the description, however, shows that it cannot possibly apply to *pustulatus*. It is, on

the contrary, a perfect description of a male *Icterus cucullatus nelsoni* not quite fully adult, and the locality in this case is entirely correct. The Arizona Hooded Oriole must consequently be called *Icterus cucullatus californicus* (Lesson). I am happy to report that this reference was called to my attention by Mr. van Rossem, who independently reached exactly the same conclusion.

FAMILY THRAUPIDAE

TANAGRA ELEGANTISSIMA (Bonaparte)

Chilpancingo, 2 ♂, December and April.

PIRANGA RUBRA COOPERI Ridgway

Chilpancingo, 1 ♀, Dec. 3, 1931.

Not previously recorded south of Colima.

PIRANGA LUDOVICIANA (Wilson)

Taxco, 3 ♂; Chilpancingo, 1 ♂, 4 ♀, October 10–Feb. 1

PIRANGA FLAVA HEPATICA Swainson

Chilpancingo, 12 ♂, 7 ♀, March 25–Dec. 1; Taxco, 4 ♂, 3 ♀, October.

With excellent series of breeding birds from Oaxaca, Guerrero and Jalisco before me, there is no doubt but what even larger breeding series from northern Sonora, Chihuahua, Arizona and New Mexico average a trifle larger, appreciably paler grey on the back, greener less orange on the forehead (females) and very faintly rosier below. I must fully endorse, therefore, Mr. van Rossem's critique in his recent paper on Sonora land birds (Proc. San Diego Soc. Nat. Hist., 6, 1931, pp. 290–291), where he recognizes the northwestern extreme as *oreophasma* Oberholser. The situation is obscured (1) by the migratory habits of the northern bird, (2) by the fact that the winter plumage of true *hepatica* is barely distinguishable from May and June specimens of *oreophasma*, and (3) by the fact that the type of *oreophasma* is an intermediate. The range originally assigned to it was far too extensive, as van Rossem points out. Nevertheless I must confess that *oreophasma* is, in my opinion, a very poor subspecies, as compared to every other Middle American race, and Mr. Zimmer can

scarcely be criticised for not recognizing such slight average differences in his recent review of this polymorphic species.

PIRANGA ERYTHROCEPHALA ERYTHROCEPHALA (Swainson)

Chilpancingo, 1 ♂, May 31, 1932.

This lovely little Tanager is still rare in collections. This Museum possesses five specimens from northern Chihuahua which are strikingly distinct in their paler and duller coloration from the typical form. The species was based on specimens from Mexico collected by Bullock at Temascaltepec. Swainson's description applies clearly to the more richly colored southern bird. So does the description of Salvin and Godman in the *Biologia*, and the colored plate of a specimen collected by White in the Dept. of Mexico exactly corresponds to the adult male from Guerrero. I consequently propose

PIRANGA ERYTHROCEPHALA CANDIDA subsp. nov.

Type. No. 222049, Mus. Comp. Zoöl.; ♂ ad.; Chihuahua, Hacienda de San Rafael; May 15, 1888; M. Abbott Frazar.

Characters. Adult male differing from typical *erythrocephala* in having the pileum pinkish vermilion rather than scarlet vermilion; this cap bordered by yellowish green feathers in marked contrast to olive green of back; throat paler and pinker; flanks greyish olive instead of olive green; female greyer, less olive above and whiter, less yellow below.

Ridgway records the species from Trompa, Chihuahua. The specimen is before me, but was collected by McCleod at La Triunfa.

Thanks to the kindness of the American Museum of Natural History, I have before me two adult males in their collection from Jalisco. These are as usual intermediate, the pink of the head almost as rich as in typical *erythrocephala*, but the flanks greyish olive as in *candida*.

FAMILY FRINGILLIDAE

HEDYMELES MELANOCEPHALUS MELANOCEPHALUS (Swainson)

Chilpancingo, 1 ♀, Nov. 15, 1931, large bird with large bill.

HEDYMELES MELANOCEPHALUS MACULATUS Audubon

Chilpancingo, 8 ♂, 4 ♀, March 25–Sept. 29.

The identification of these Grosbeaks involved a careful survey of our Mexican specimens, now finally determinable thanks to van Rossem's studies (cf. especially Auk, 1932, p. 489). It seems pretty clear that the type of *melanocephalus* is a particularly large winter migrant of the large Rocky Mountain race. The question still remains, therefore, what is the breeding bird of the Mexican plateau? It proves to be an ill-defined intermediate. Speaking only of breeding birds for the moment, typical *melanocephalus* breeds in the mountains of northern Chihuahua and Sonora. Typical *maculatus*, by which I mean specimens not trenchantly separable from California series, breeds at Oposura, Sonora (series). Breeding specimens from Nuevo Leon, Tamaulipas and Guerrero differ from *maculatus* in having a larger bill, about half way to the measurements of *melanocephalus*. Winter specimens may be almost anything. From Alamos, Sonora, we have extreme specimens of both races, and typical *maculatus* at Opodepe as late as May 8. Other winter specimens of typical *maculatus* come from Sinaloa (Escuinapa, Dec. 15, 1895), Colima (April 3, 1913) and Michoacan (Patzcuaro, April 4). Presumably the greater number of true *melanocephalus* winter in the eastern half of Mexico. In Chihuahua it is resident, as we have three specimens taken at Durazno in late December.

PHEUCTICUS CHRYSOPEPLUS CHRYSOPEPLUS (Vigors)

Chilpancingo, 1 ♀, Oct. 5, 1931.

This Grosbeak has never been recorded as far south as Guerrero, but its occurrence there is entirely consistent faunally.

GUIRACA CAERULEA INTERFUSA Dwight & Griscom

Chilpancingo, 1 ♂, 1 ♀, Feb. & March 14.

GUIRACA CAERULEA EURHYNCHA Coues

Coyuca, 1 ♂, Jan. 30; Chilpancingo, 14 ♂, 9 ♀, throughout the year, including good series of breeding birds.

Many of these specimens are intermediate between *interfusa* and *eurhyncha*, resembling the breeding birds of much of northwestern Mexico. In color the females are dark and rich like *eurhyncha*, but the bill is nowhere near as heavy and powerful as typical *eurhyncha* from Vera Cruz and the isthmus of Tehuantepec.

SPOROPHILA TORQUEOLA TORQUEOLA (Bonaparte)

Coyuca, 1 ♂; Chilpancingo, 4 ♂, 5 ♀, throughout the year.

This series is of interest in connection with another from Morelos in showing an approach to the little known *albitorquis* (Sharpe) from Oaxaca, which is alleged to have a white collar on the hind neck. Three of the adult males from Guerrero have a partial white collar and all the adult males from Morelos have a partial collar. No more can be done without a series from Oaxaca to determine the constancy of the collar there. In no case can *albitorquis* be more than a southern race of *torqueola*. Or it may well be a plumage phase only, which is paralleled in *aurita*.

AMAUROSPIZOPSIS genus novum

Diagnosis. Very close to *Amaurospiza* Cabanis of the rain forests of southern Central America and obviously representing it, but a larger bird with a proportionately shorter and deeper stubbier bill; rictal bristles twice as long, greatly exceeding the plumules, and much stiffer; nostril large, with a marked operculum; culmen distinctly ridged, a groove just over the nasal fossae, extending forward two thirds of the way to the tip of the maxilla; maxilla with five other fainter ridges and grooves extending diagonally from the nostril to the commissure.

Type. *Amaurospizopsis relictus*.

AMAUROSPIZOPSIS RELICTUS spec. nov.

Type. No. 164702, Mus. Comp. Zoöl.; ♂ ad.; mountains above Chilpancingo, Guerrero, Mexico; May 19, 1932; W. W. Brown.

Description. Uniform dull greyish blue, slightly bluer on the lesser wing-coverts, greyer and paler on belly; chin dusky; loreal region black; sides of head below eye dusky; remiges blackish, the primaries narrowly edged externally with greyish, the secondaries very broadly with greyish blue; rectrices blackish, narrowly edged on outer webs with greyish blue; bill dusky, the lower mandible abruptly whitish for terminal third; legs and feet dusky; iris brown (note by collector); wing 69, tail 59, tarsus 19, culmen 9.5.

Discussion. The very rare and little known genus *Amaurospiza* belongs in a group of fringilline forms, which include the genera *Oryzoborus*, *Cyanocompsa*, *Sporophila*, *Euethia*, *Volatinia*, *Passerina*,

and probably *Melopyrrha*, *Loxipasser*, and still other more slender billed forms. They differ from each other chiefly in size, proportions, and color pattern, and above all in the relative size and proportions of the bill. In this latter respect *Amaurospiza* is about intermediate between *Sporophila* and *Volatinia*, but has a broader bill basally than either, thus resembling *Oryzoborus* and *Cyanocompsa*. All of these



Fig. 1. Structural details of *Amaurospizopsis*. Life size.

genera agree in having small round nostrils without any operculum in a short nasal fossa, and short, weak, rictal bristles, scarcely or not exceeding the plumules. The uniform style of coloration is, of course, common to many members of the group.

While, therefore, at first sight, Ridgway's key in the Birds of North and Middle America, Pt. I, does not disclose any striking and trenchant differences in structural characters, the very different distribution of these genera, the highly discontinuous or relict distribution of some of them, and the number of genera with representative

species all occurring in one locality, are all factors which point to the relative antiquity and constancy of these generic characters.

The genus *Amaurospiza* is an excellent illustration. Its bill characters and color pattern are a mere shuffle of those possessed by several others. It does not possess one single definite character of its own. But it occurs in a region where five other genera are commonly represented (tropical rain forests of southern Central America), and it reappears in west Ecuador and southeastern Brazil, always as a very rare bird, an obvious relict from a more successful past.

With *Amaurospizopsis* we have an exactly similar situation. In color characters it is a mere replica of *Amaurospiza*, at most subspecifically distinct. It does, however, possess some definite structural characters which are *sui generis*, and these are correlated with its occurrence in a faunal area uninhabited by any other genus of the group. In response to my explicit inquiry Mr. Brown writes that the type and only specimen seen was flushed from the ground among bushes in a mountain ravine in the pine forest above Chilpancingo. The female is unknown, but I have little doubt but that it will prove to be some uniform shade of brown, like *Cyanocompsa*, *Oryzoborus* and *Amaurospiza*. The measurements of the type are given in the table beyond.

We may now return briefly to the little known *Amaurospiza concolor* Cabanis, the type species of that genus. The adult male in Berlin was collected by Frantzius in "Costa Rica" before 1861. Five other specimens have since been collected in that country, four from Miravalles and Tenorio in northwestern Costa Rica, and one from Boruca in southwestern Costa Rica. Frantzius collected in the former region, but definitely did not in the latter. Cabanis' detailed description and measurements agree perfectly with specimens from northwestern Costa Rica before me. I consequently designate Miravalles, Costa Rica as a more definite type locality. Thanks to the kindness of the authorities of the American Museum of Natural History in loaning me their five specimens of this very rare bird, I have before me twelve specimens, all but three of the recorded specimens extant. Subspecific variation is as follows.

1. *Amaurospiza concolor concolor* Cabanis. Known definitely only from Miravalles and Tenorio, northwest Costa Rica. Size relatively small; adult male uniform dull blue of a distinctly greyish cast, especially on abdomen and vent; adult female rufescent or even tawny above, of a distinctly paler cast below. One ♂ and 2 ♀ examined.

2. *Amaurospiza concolor grandior* subsp. nov.

Type. No. 103811, American Museum of Natural History; ♂ ad.; Peña Blanca, humid Caribbean forest of eastern Nicaragua; June 5, 1909; W. B. Richardson.

Characters. Adult male a dark dull indigo blue, not so grey as in typical *concolor*; female colored as in *concolor*; a larger bird with a longer bill. Three ♂, 1 ♀ from the type locality and Rio Tuma examined.

3. *Amaurospiza concolor australis* subsp. nov.

Type. No. 164571, Mus. Comp. Zoöl.; ♂ ad.; Boquete (5,100 ft.), Chiriqui, Pacific slope of western Panama; Nov. 20, 1931; Rex. R. Benson.

Characters. Relatively small as in *concolor*; adult male indigo blue as in *grandior*; adult female dark mars brown above, paler below, not at all rufescent or tawny. One ♂ ad. from Boruca, southwest Costa Rica; 3 ♂ ad. 1 ♀ from Boquete, Chiriqui.

Remarks. The immature male apparently has the same plumage as the female. The male of typical *concolor* from Costa Rica has a few brown feathers of the immature plumage in the back. These are strongly rufescent or tawny as in the female. Judging by the description and measurements the adult male in the British Museum from Paraiso, Canal Zone belongs here.

Table of Measurements of Males

	Wing	Culmen	Depth of bill at gonys	Width of bill at base
<i>Amaurospizopsis</i>	69	9.5	7.8	9.2
<i>Amaurospiza</i> c. <i>grandior</i>	62.5-64	9.8-10.2	...	8.6-8.9
“ c. <i>concolor</i>	61.5	9.5	7.6	8.9
“ c. <i>australis</i>	59-63.5	9-9.5	6.8-7.3	8.6-8.9

VOLATINIA JACARINI ATRONITENS Todd

Coyuca, 1 ♂.

CARDINALIS CARNEUS Lesson

Acapulco, 1 ♂, 1 ♀; Coyuca, 4 ♂, 2 ♀.

SALTATOR GRANDIS VIGORSII Gray

Coyuca, 2 ♂ juv., 1 ♀.

SPINUS NOTATUS FORRERI (Salvin & Godman)

Chilpancingo, 1 ♂, May 11, 1932.

The Brewster Collection contains a very large series from northern Chihuahua. Thanks to the authorities of the American Museum of Natural History I have before me 15 specimens of *forreri* from Jalisco, with which the Guerrero bird agrees. Chihuahua birds have a bill about 1 mm. longer on the average, the adult males average a paler, less greenish yellow on the rump, and the females are much paler olive green above, with duller, paler streaking. The name *forreri* is based on specimens from Durango, and there is no telling to which of these extremes Durango specimens belong.

SPINUS PSALTRIA MEXICANA (Swainson)

Chilpancingo, 8 ♂, 2 ♀; Taxco, 1 ♂, 1 ♀; throughout the year.

CARPODACUS MEXICANUS MEXICANUS (Müller)

Chilpancingo, 26 ♂, 9 ♀, throughout the year.

These birds do not seem to show the slightest approach to the characters claimed for the little known *roscepectus* Sharpe from Oaxaca.

POECETES GRAMINEUS CONFINIS Baird

Chilpancingo, 1 ♂, 2 ♀, Oct. 13–Nov. 27, 1931.

CHONDESTES GRAMMACUS GRAMMACUS (Say)

Chilpancingo, 1 ♂, Feb. 22, 1932.

This specimen in its darker and broader streaking above and darker chestnut crown stripes is distinctly nearer typical *grammacus*, which has not previously been reported from so far south and west in Mexico.

CHONDESTES GRAMMACUS STRIGATUS (Swainson)

Taxco, 1 ♂, 1 ♀, Oct. 9, 1930; Chilpancingo, 6 ♂, 4 ♀, Oct. 27–Feb. 22.

PASSERCULUS SANDWICHENSIS ALAUDINUS (Bonaparte)

Chilpancingo, 2 ♀, Dec. 20–March 14.

AMMODRAMUS SAVANNARUM AUSTRALIS (Maynard)

Chilpancingo, 4 ♂, 2 ♀, Nov. 17–March 5.

In their smaller size, shorter tails, darker coloration above and richer buff below, this series must be referred to *australis*, which is now known to reach western Guatemala on migration.

AMMODRAMUS SAVANNARUM BIMACULATUS (Swainson)

Chilpancingo, 2 ♂, 10 ♀, Nov. 15–March 25.

AIMOPHILA HUMERALIS HUMERALIS Cabanis

Taxco, 2 ♂, 2 ♀; Chilpancingo, 10 ♂, 6 ♀; throughout the year.

Western Mexico is remarkable for the number of species in this genus, each with a very limited range. The fine series listed above, together with four from Morelos and another from Acapulco are surprisingly alike. Very worn breeding birds sometimes lose all sign of black streaks on the back, but in fresh fall and winter plumage each feather of the back has a broad black subterminal shaft stripe, affecting the terminal half or third of the feather. I was much surprised to find a fresh winter specimen taken Jan. 20, 1889 from Colima in the collection, a notable range extension for the species. It is quite distinct and is described below.

AIMOPHILA HUMERALIS ASTICTA subsp. nov.

Type. No. 111800, Mus. Comp. Zoöl.; ♂ ad.; Colima, Colima, Mexico; Jan. 20, 1889; collector not given, but undoubtedly W. B. Richardson from the handwriting on the original label.

Characters. Differing obviously from typical *humeralis* in lacking the black streaks on the back, these replaced by more diffuse dusky centers; rump concolor with back, instead of greyish brown, with or without (almost always) faint rufescent tips to some of the feathers.

AIMOPHILA ACUMINATA Salvin & Godman

Coyuca, 4 ♂, Feb. and March 1931.

In color this bird is a mere subspecies of *ruficauda*, but is so abruptly smaller than *lawrencii* of Oaxaca that I hesitate to reduce it, until a connecting link is discovered.

AIMOPHILA RUFESCENS SUBVESPERA subsp. nov.

Type. No. 164571, Mus. Comp. Zool.; ♀ ad.; Guerrero, Chilpancingo; March 2, 1932; W. W. Brown.

Characters. Size averaging larger than typical *rufescens* of Vera Cruz, wing of males 73-76.5 as against 67-74.5, about as in *pallida* Nelson and Palmer of Jalisco, but much smaller than *gigas* Griscom of western Guatemala; in fresh plumage paler and duller than *rufescens*, greyer and browner, less rufous on back and tail; crown stripes more rufous, less chestnut; in these respects even paler than *gigas*, but very close to *pallida*, not quite so pale; in worn breeding plumage very different from *rufescens*, as the greyer brown effect of the back is intensified, while *rufescens* becomes uniform rufous; immediately separable from *pallida* in any plumage by having black in the rufous crown stripes and a well marked grey central crown stripe.

Material Examined. *Rufescens*, large series from Vera Cruz and Vera Paz; *subvespera*, Guerrero, Chilpancingo, series of 36; Oaxaca, Tapanatepec, 1 ♂, 1 ♀; *gigas*, good series.

In so variable a bird it is by no means surprising that a fine series of perfect skins from a section of southwestern Mexico, where the species is previously unrecorded, should prove to be a distinct subspecies. With the type and a large series of *meleodii* Brewster before me, it is evident that this is a mere northwestern extreme of *rufescens*. This name has ample priority over *pallida* Nelson & Palmer, which in characters is an intermediate between *subvespera* and *meleodii*. It has, however, distinctive characters, readily recognizable in the series in New York, and occupies a sufficient geographic area to be worthy of recognition. I cannot, however, see the slightest excuse for the recognition of *sinaloa* Ridgway. I have never seen the unique type, but from Ridgway's description and comments, it would seem to be a specimen of *pallida* in very fresh plumage, which straggled down from the mountain pine forests, where *pallida* is common, to the adjacent foot hills.

AIMOPHILA RUFICEPS FUSCA (Nelson)

Chilpancingo, 18 ♂, 12 ♀.

This fine series must be assigned provisionally to *fusca*. The birds are distinctly more rufescent than *boucardi*, but as dark above as that race, consequently much darker than *scottii*. There is some confusion about the range of *fusca*. In his key Ridgway assigns Guerrero to the

range of *fusca*, but does not in the text, where he records *boucardi* from Tixtla, Guerrero. There is not the slightest question however, that the series listed above is not *boucardi*, unless large series from southern Tamaulipas and Neuvo Leon should prove not to be *boucardi*, which is based on a bird from Puebla. It is my impression that this species as regards Mexico badly needs revision. This cannot be done, however, until a good series from Puebla is collected, and until Oaxaca is searched for additional material to represent *australis* (Nelson).

AIMOPHILA BOTTERII BOTTERII (Sclater)

Chilpancingo, 2 ♂, 2 ♀.

JUNCO PHAEONOTUS PHAEONOTUS Wagler

Chilpancingo, 1 ♂, May 30.

SPIZELLA SOCIALIS ARIZONAE Coues

Chilpancingo, 1 ♂, Nov. 27.

SPIZELLA SOCIALIS MEXICANA Nelson

Taxco, 1 ♂, 3 ♀, Oct. 9–Nov. 10.

SPIZELLA PALLIDA (Swainson)

Chilpancingo, 4 ♀, Nov. 15–Jan. 10.

SPIZELLA ATROGULARIS (Cabanis)

Chilpancingo, 1 ♀, Feb. 21, 1932.

Previously unrecorded so far south.

MELOSPIZA LINCOLNII LINCOLNII (Audubon)

Coyuca, 1 ♂; Chilpancingo, 1 ♂, 2 ♀, Nov. 17–Feb. 25.

PASSERINA CIRIS PALLIDIOR Mearns

Coyuca, 1 ♂, 7 ♀; Taxco, 1 ♂; Acapulco, 1 ♂; Oct. 17–April 2.

PASSERINA CYANEA (Linnaeus)

Coyuca, 1 ♂; Naranjo, 1 ♀; Chilpancingo, 1 ♂, 1 ♀; Nov. 5–Feb. 27.

PASSERINA AMOENA (Say)

Chilpancingo, 2 ♂, Feb. 10 and March 15.

Previously unrecorded so far to the south.

PASSERINA LECHLANCHERI LECHLANCHERI (Lafresnaye)

Coyuca, 5 ♂, 2 ♀; Acapulco, 1 ♂.

The type locality for this beautiful little Bunting is Acapulco, Guerrero. The species has previously been represented in this Museum by 16 specimens from Oaxaca, and I was much surprised, upon comparing them with the topotypes recorded above, to discover that the Oaxaca birds are appreciably larger.

PASSERINA LECHLANCHERI GRANDIOR subsp. nov.

Type. No. 238393, Mus. Comp. Zoöl.; Chivela, Oaxaca; March 19, 1927; W. W. Brown.

Characters. Differing from typical *lechlancheri* of Guerrero in being a larger bird throughout.

	Wing of males	Females
<i>lechlancheri</i>	64-66 (65.2)	60-61 (60.5)
<i>grandior</i>	67.5-70.3 (68.8)	63-64.5 (63.9)

PASSERINA VERSICOLOR VERSICOLOR (Bonaparte)

Chilpancingo, 3 ♂, Jan. 25-March 15.

These three specimens are in winter plumage, and obviously represent typical *versicolor*.

PASSERINA VERSICOLOR PURPURASCENS Griscom

Chilpancingo, 1 ♂, March 27.

This specimen is not in winter plumage and stands out clearly from the three *versicolor* recorded above. This bird, with two definitely breeding specimens from Cuernavaca, Morelos, is intermediate between *versicolor* and *purpurascens*, but distinctly nearer the latter in color, though not in size.

MELOZONE RUBRICATUM RUBRICATUM Cabanis

Chilpancingo, 5 ♂, 4 ♀.

These birds and an equally good series from Morelos presumably represent true *rubricatum*. A good series (9) from northern Chihuahua is very different, a much paler and duller brown above, the pileum and duller paler rufous, and a slightly larger bird. Two birds from Tepic represent *xantusii* Lawrence. They are intermediate on the whole, but the coloration above, especially on the rump, is a brighter brown, less olive, greyish or hair brown. Should series from Colima, Jalisco and Sinaloa confirm the constancy of these characters, the Chihuahua bird should be described.¹

ARREMONOPS SUPERCILIOSUS SUMICHRASTI (Sharpe)

Acapulco, 1 ♀; Coyuca, 2 ♂, 2 ♀, January–April.

ATLAPETES PILEATUS PILEATUS Wagler

Chilpancingo, 1 ♂, April 21.

PIPILO TORQUATUS TORQUATUS Du Bus

Chilpancingo, 2 ♂, 3 ♀.

In default of comparative material, I follow Ridgway in assigning these birds to the typical subspecies.

BUARREMON BRUNNEINUCHUS (Lafresnaye)

Chilpancingo, 4 ♂.

The minor size variations of this finch cannot be correlated geographically, and had best be ignored. Birds from southwestern Mexico are notably larger than Vera Cruz specimens, and Guatemala birds belong here too. Specimens from Costa Rica and western Panama are small, like Vera Cruz birds, while Colombia and Ecuador skins are large again.

I do not recall any modern up-to-date list of the birds of a Mexican State, so I add a list of the species recorded from Guerrero, not secured by Brown.

¹This has since been done.

- Oceanodroma melania* (Bonaparte)
Nycticorax nycticorax hoaei (Gmelin)
Accipiter cooperi (Bonaparte)
Dendrotyx macrourus striatus (Nelson)
Philortyx fasciatus (Gould)
Cyrtonyx sallæi Verreaux
Dactylortyx thoracicus subsp.
Haematopus palliatus frazari Brewster
Heteractitis incana (Gmelin)
Chlidonias nigra surinamensis (Gmelin)
Sterna anaetheta nelsoni Ridgway
Anous stolidus ridgwayi Anthony
Larus heermanni Cassin
Columba flavirostris flavirostris Wagler
Oreopectia albifacies rubida (Nelson)
Ara militaris mexicana Ridgway
Brotoperys jugularis (Müller)
Amazona oratrix oratrix Ridgway
Coccyzus erythrophthalmus (Wilson)
Otus trichopsis trichopsis (Wagler)
Caprimulgus vociferus macromystax Wagler
Chordeiles acutipennis micromeris Oberholser
Streptoprocne zonaris mexicana Ridgway
Phaethornis longirostris mexicanus Hartert
Anthoscenus longirostris pallidiceps (Gould)
Campylopterus hemileucurus (Lichtenstein)
Eupherusa poliocerca Elliott
Lampornis margarethae (Salvin & Godman)
Lampornis pringlei (Nelson)
Trogon ambiguus ambiguus Gould
Aulacorhynchus prasinus wagleri (Sturm)
Centurus hypopolius (Wagler)
Chloronerpes auricularis Salvin & Godman
Phloeocastes guatemalensis nelsoni (Ridgway)
Xenicopsoides variegaticeps (Sclater)
Automolus rubiginosus guerrensis (Salvin & Godman)
Xiphorhynchus flavigaster megarhynchus (Nelson)
Xiphorhynchus erythropygius erythropygius (Sclater)
Lepidocolaptes lineaticeps insignis (Nelson)
Attila spadicea cinnamomea (Lawrence)
Pachyrhamphus major uropygialis Nelson
Mitrephanes phaeocercus tenuirostris Brewster
Deltarhynchus flammulatus (Lawrence)
Nuttallornis mesoleucus (Lichtenstein)
Myiochanes richardsonii sordidulus (Sclater)
Empidonax difficilis difficilis Baird
Empidonax fulvifrons rubicundus Cabanis & Heine
Sayornis nigricans nigricans (Swainson)
Pitangus sulphuratus derbianus (Kaup)
Xanthoura luxuosa subsp.?
Cyanolyca mirabilis Nelson
Aphelocoma guerrensis Nelson
Nannorchilus leucogaster pacificus (Nelson)
Thryophilus pleurostictus subsp.
Thryophilus pleurostictus (? *nisorius*)
Thryophilus sinaloa russcus Nelson
Catharus frantzii omiltemensis Nelson
Hylocichla ustulata ustulata (Nuttall)
Vermivora superciliosa subsp.
Granatellus venustus Bonaparte
Basileuterus belli clarus Ridgway
Chlorospingus ophthalmicus albifrons Salvin & Godman
Pipilo rutilus (Lichtenstein)